

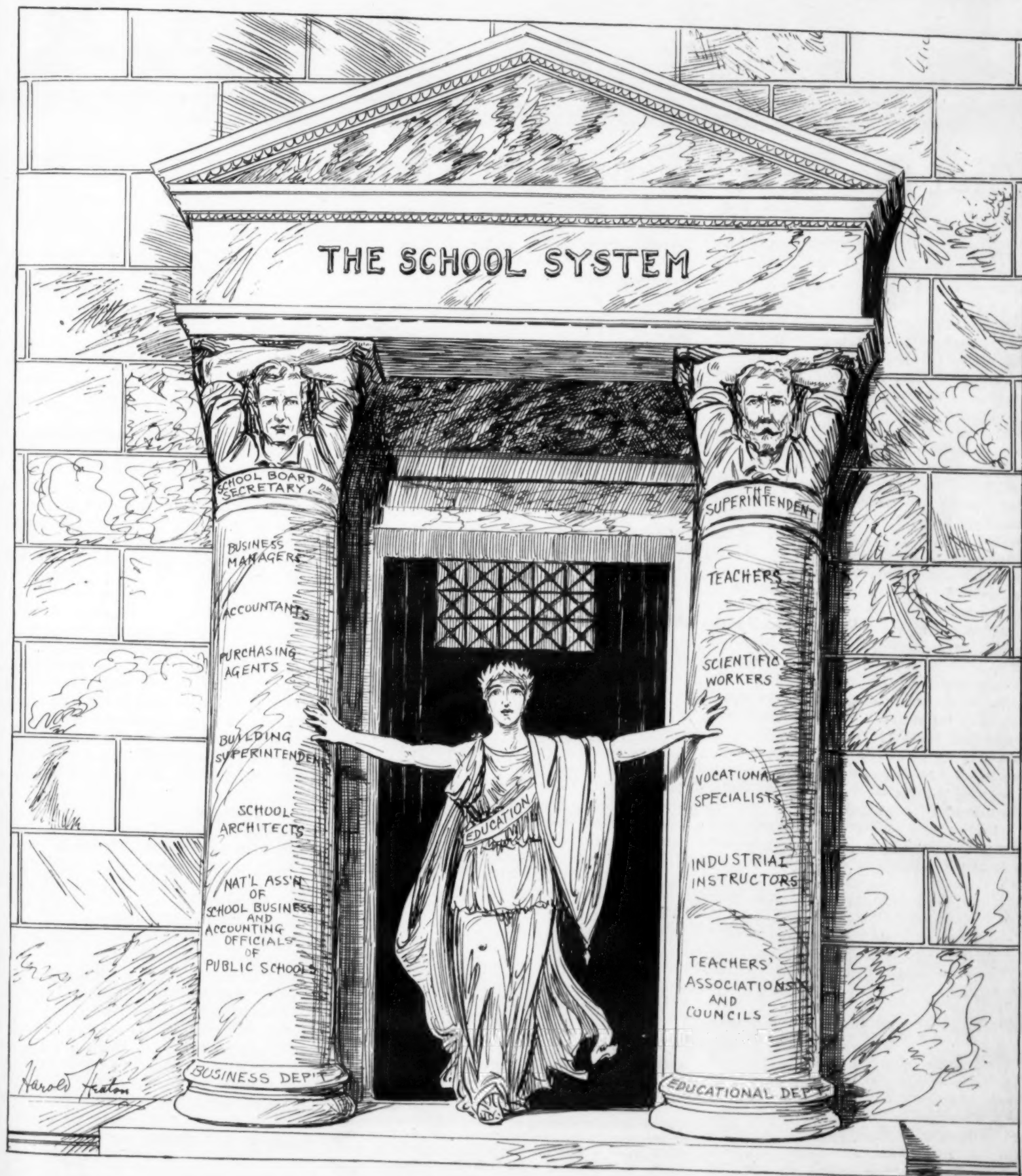
THE AMERICAN School Board Journal

Founded March 1891 by WILLIAM GEORGE BRUCE

Volume LXI, Number 1

JULY, 1920

Subscription, \$3.00 the Year



BOTH PILLARS MUST BE STRONG!



What the Teacher and His Family are Up Against

By a Teacher's Wife

We are a family of four—my teacher, our two precious children, and I. My teacher is a graduate of a well-known college, one which was founded some thirty years before the civil war, and which has turned out many noted men—judges, preachers, bishops, lawyers and teachers. In addition he holds a degree from a university, second to none in the United States in the teaching of psychology and education. And I do not hesitate to say he is a successful teacher. We are living in a prosperous community, a county seat of about 1,200 population, with banking resources of two and one-half million dollars. It is made up for the most part of cultured people of means. These are the patrons of the high school of which my husband is principal and in which he teaches, and of the elementary school which he supervises. These people have nice homes, good clothes, automobiles and they entertain often and quite elaborately.

We are supposed to live on a standard with this community and to do this with a salary on which in 1914 we could have had a comfortable living and kept up our insurance. By practicing economy (which is of necessity a second nature to the teacher), we could have saved a little toward the education of our children. Now that the dollar has decreased in value till it is worth only about 50 cents or less as compared with 1914, this means we are facing a very discouraging proposition.

As I said before, we have always practiced economy, and especially do we try to make this apply to little things. For instance, we wouldn't think of having our shoes shined, or of taking our children to the barber shop for a hair cut. My husband shaves himself, and I clean and press his suits. He splits the wood and carries it up the two flights of steps to the rooms where we live. I do my sewing and laundry work, and so we spend very little for labor.

Thus far the item of clothing for our children has not been a very great one, for I have made their little garments from our cast-off clothing, from things that have been given me and from remnants bought at the bargain-counter. There being only a little more than a year's difference in their age, the baby girl has stepped right into the boy's outgrown garments, from the long dresses on down to the little overalls she delights so much in wearing. Their coats for this winter I made from a coat of mine which had given me four winters' good service; their leggings were made

from a pair of heavy drawers dyed to match the coats, and an old muffler furnished the material from which to cut and make the mittens.

Tho my teacher's shoes were bought over two years ago, they still look very well when polished, and he says they must last till spring. His school suit is his last winter's Sunday suit, mended, cleaned and pressed. It cost only \$25 when new, a so-called bargain, tho it wasn't worth more than the price. He wears for his Sunday best a reclaimed 1917 suit. When it was mended neatly, and the trousers washed and pressed, it put on anew a part of its original good looks. I make all of his clothing that can be made at home—shirts, pajamas, summer underwear, even his neckties. I make over my dresses and wear them as long as I can; retrim my hats and wear them two and three seasons, and have my shoes repaired as long as they are worth it. Because I seldom have a new dress, new hat and new shoes all at the same time, which are necessary to accepting the invitations which come to me, I invent excuses and stay at home. Needless to say, the invitations have dwindled.

Everything is a luxury for teachers—books, music, magazines, and all the things which educated people enjoy. My teacher longs to read the new scientific books that are published, and he should have them in order to grow in his profession, but there is no money for them. It must go for food and rent and doctor's bills. Our children are at an age when they should hear good music. How I wish to bring to them at this impressionable stage in their lives the music of the great artists thru the modern talking machine. And I used to play the piano—surely I haven't forgotten it all. How I long sometimes just to touch one and to play to the children. But my teacher only smiles and says, "We are educated above our means. We musn't wish for things we can't afford. Maybe when the children are older—"

And so I go on believing, that, like the pot of gold at the end of the rainbow, maybe next month I can purchase the hair brush I have

The illiteracy in our draft army shocked us. Unless we are willing to spend millions at once on elementary full term schools for children, we shall have a double adult illiteracy in a few years. The Federal child labor law protects only children in mines, quarries, and factories. We must protect every child, and the protection of the school is the surest and sanest. It is costly in money, but cheap and effective in result.—Julia C. Lathrop.

long wished for in order to give my hair the care it needs, or perhaps when we are out of debt I can afford some pink face powder. Even being pretty is a luxury in the teacher's family. But it always turns out that the money is scarcer this month than last, the salary less elastic. And so we must pinch a little tighter to be out of debt by spring, so that if the job goes or there is a better place somewhere else, we will have something ahead to pay moving expenses.

Sometimes I get discouraged and think there is no use to skimp and save and go on trying to keep up appearances when no one appreciates it. Why wasn't my husband a clam digger or a laborer in a factory? Then it wouldn't matter about appearances or the clothes we aren't able to buy.

And when I get to feeling so, my brave teacher says, "Cheer up, girl, and keep sweet. Maybe there are better times ahead."

"Yes, let us hope so," I reply, "for our children can't be always clothed from your old clothes and mine, and little remnants of a yard or two. They must have books to go to school ere long, and the linen from my bridal linen chest which I have patched and mended, must sometime be replaced. And what about you? You teach all day and teach at night those young men who work and cannot go to school by day; then lie awake nights planning how to make ends meet. How can you go on always thus? You, too, will wear out like the sheets and table cloths. Why can't these patrons who are too busy making money to have time to teach their children, why can't they see thru their eyes of business that you could teach much better if the debts were paid and the nights of sleepless worry were eliminated."

But this I never say to him; that I feel his muscles jerk and twitch at night from nervousness as he lies by my side falling into restless slumber. Yet I often lie there thinking about the sweet little minister's wife I met last summer at the hospital whose husband had been there four months from a nervous breakdown and was still not well. What if this should come to him! What would become of us and how could we pay with nothing saved! Such thoughts as these drive visions of pink powder and pretty dresses from my mind, for the cold sweat breaks out on my forehead. And then I try not to think at all, but just go on living one day at a time, working, and loving, and trusting, that as my cheery teacher says, "There are brighter days ahead."

Certification by Examination—the Open Door to the Teaching Profession

Katherine M. Cook, Specialist in Rural Education, U. S. Bureau of Education

The present effort to raise the salaries of teachers has become nation wide in extent, and is attracting the interest and attention of thoughtful citizens not to salaries alone, but to the whole matter of the efficiency of our public school system. It is generally conceded that higher salaries, commensurate with the importance of public education and sufficient to enable those engaged in it to maintain at least the traditional social standing, are essential. Emergency conditions have also centered attention on other and contributing factors concerning the quality and universality of instruction and the opportunity to obtain it, which even if not so immediately urgent are no less essential to the permanent welfare of the schools and the teacher.

Thousands of teachers not only are underpaid but utterly unqualified—measured by any reasonable standard. Attendance at teacher preparing institutions is decreasing when it should be increasing, at least at the normal rate. Emphasis must be placed not alone on keeping the qualified teachers we now have, but also on recruiting the force with those capable and prepared to sustain, if not to improve, the present standards of instruction for the future. In short, not immediate and temporary relief, but the achievement of permanent results must receive our thoughtful consideration. Substantial salary increases if forthcoming immediately may induce many of the capable teachers to return to their classrooms; attract others into the service and even increase attendance in teacher preparing schools. But they can not alone afford more than partial relief nor insure permanent results. The real obstacle lies not in the matter of low salaries alone but equally in their inevitable accompaniment—low standards of qualification and consequent crowding of the lists of applicants for schools with those unfitted in ability, education and experience. This situation is not an emergency one but is of long standing. After-war conditions and high living costs have merely exaggerated what was a serious matter before these special influences were felt.

Teaching positions have long been within easy reach of young, unprepared and often incapable persons, who desire temporary employment only, or use school work as a stepping stone to better paid occupations. During the last three years emergency and temporary certificates have been issued in larger numbers than ever before; and regulations governing the issue of low grade certificates have been interpreted with less rigidity or disregard in whole or in part. If the thousands of teachers licensed under these conditions, who have no education beyond the elementary school and one or two years of high school, are recognized as permanently eligible candidates for teaching positions; if thru the emergency or low-grade-certificate route others similarly qualified continue to receive teaching licenses, the present wave of public interest may be expected to subside without leaving permanent results in the way of adequate salaries and larger opportunities.

A deeper interest in the laws for licensing teachers and more careful study of their relations to the present shortage of teachers, to the low salary scale, and to the lack of professional ideals among the teaching force as a whole is worthwhile to one concerned with the welfare of the schools or of the teaching profession.

Methods of Certification.

There are, at present, two ways of obtaining certificates to teach—thru completion of pro-

fessional courses in teacher training institutions and thru examination. Both are equally recognized and equally honorable. Once a certificate is obtained, the candidate may accept any position he can get. Neither his salary nor possibility for advancement (except in a few states) is restricted by his lack of special preparation for educational work. It is not even necessary to serve an apprenticeship before receiving the privileges and emoluments of a teaching position. In this respect teaching ranks with unskilled labor. In all the professions, in the trades, arts, crafts, or industries, special preparation or apprenticeship or both are demanded. Some systems require successful experience and professional training of candidates, but the largest number of teachers entering the profession each year enter thru the examination route, and are below any reasonable standard of educational preparation and experience. Even in those states and systems in which the number of entrants is limited by laws or regulations fixing minimum qualifications or a salary scale based on certain standards of preparation and experience—normal requirements have been ignored under stress of the recent emergency. Thruout the country standards already low have been made still less exacting. Even if we assume that this emergency lowering of standards is temporary, the menace of the continuing possibility of easy certification thru examination remains.

Candidates for teaching licenses may choose between the two means of securing them. On the one hand graduation from college or normal school involving six or eight years of preparation beyond the elementary grades. On the other a year or two in high school, (or even less) possibly a few weeks' attendance at summer school or institute, a little judicious cramming and the regular teachers' examinations. These usually include the branches taught in the elementary schools, one or two of the high school and professional subjects. To these agriculture, music, drawing, home economics, physical education or the like may or may not be added. In general it is safe to say that any ambitious person who has completed the elementary grades may with a little self-preparation, reasonably expect to pass them satisfactorily. It is not surprising that the majority of license seekers choose the easier way.

The grades required vary for different certificates, and vary among states, some of which are more rigid concerning requirements than others. There is no uniformity among them as to terms used to designate certificates or as to their significance and value measured by requirements. All examinations are inadequate as a test of teaching ability. Even as a test of knowledge of subjects they are rapidly giving way to the more scientific method of objective tests in modern school systems. Yet not only is the examination method of granting licenses retained in the majority of states but in many of them teachers' institutes of one or two weeks and definite courses in summer sessions of normal schools are frankly devoted to reviews in the common and other required branches with the avowed purpose of preparing for the teachers' examinations. Preparation in the science and art of teaching is subservient to the main purpose of ability to pass the examination.

Safeguards in the Examination Methods.

In a few states the examination method of licensing is safeguarded by a prerequisite requirement with which the applicant must comply. At present there are four states (confining

ourselves to legal requirements) in which this prerequisite is graduation from a four-year high school and some professional courses of higher grade. These states are Utah, Idaho, Indiana and New Jersey.

In California practice rather than law seems to have established the standard of graduation from normal school or college as the minimum requirement. Tho the examination method of certification still exists legally, only a small percentage of certificates issued are given in this way. In Massachusetts conditions are probably similar.

Other less effective safeguards are established in a few other states. The next best is that of graduation from a four-year high school as a prerequisite for entrance to examination for the lowest grade of certificate. There are seven states in which this is exacted—not including provisional and temporary certificates. It is, of course, possible that the latter are issued in such large numbers as practically to nullify the value of the legal requirement. These states are Vermont, New Hampshire, Illinois, Michigan, Washington, Maine and Oregon. (Illinois grants a provisional certificate without this requirement—apparently similar to temporary or emergency certificates in other states.)

Fourteen states require some professional training in an approved school of secondary or higher grade as a prerequisite for the lowest grade of certificate. These states are Minnesota, Vermont, New Hampshire, Michigan, Delaware, West Virginia, Oklahoma, Oregon, Wisconsin, South Dakota, Montana and Wyoming. Of these Vermont, New Hampshire and Michigan demand high school graduation. It follows, then, that in these three states the minimum prerequisite is graduation from a high school which includes teacher training courses or equivalent preparation. In the other states it is possible to satisfy the legal requirements by attending a summer school which may or may not require high school graduation for entrance. The requirements must be fulfilled in addition to passing a satisfactory examination. Considering legal requirements only the following are the prerequisites and the number of states in which each is exacted:

Completion of one year of work above high school grade, one state;

Completion of four years of high school and some professional training of higher grade, but which may be obtained in summer schools—three states;

Completion of four years of secondary work, including some professional courses, three states;

Professional training of secondary or higher grade—eight states; a total of fifteen states.

To these we may add Ohio and Wisconsin, (the former after 1924 and the latter after 1923), to those requiring professional training in addition to graduation from a high school, and possibly Virginia, in which the requirement for certification is the same as in that of the second group, but which offers the alternative of an equivalent examination. These may, or may not stand for the same thing.

If, to the above states we add Missouri, Kansas, New York, and Maryland, in which some but not all of the lower grade certificates require completion of the four-year high school, we shall have included all the states which set up for their low-grade certificate any standards, whatever, of academic or professional qualifica-

tions for teachers' licenses except that shown by an examination.

Renewal of Low Grade Certificates.

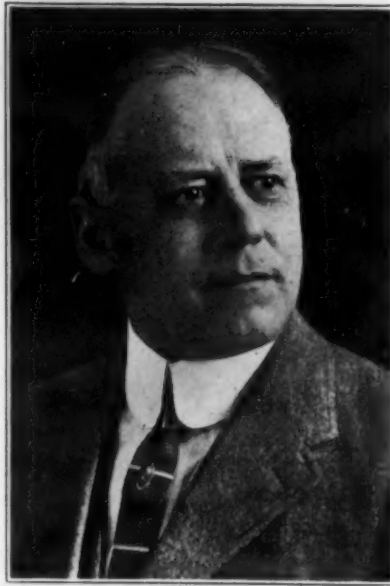
The fact that one may enter the profession thru the open door of the teachers' examination is not the only or the most serious consideration. Unless precautions are taken to avoid it teachers so licensed often continue many years' teaching on temporary or low-grade certificates. Nearly all states make some effort to prevent candidates teaching indefinitely on the temporary certificate and a few use preventive measures against continued renewals of the third or lowest grade certificate. Emergency certificates are rarely renewable, but often reissued. Sometimes second and third grade certificates are not subject to renewal and the number of times they are issued to any one person is limited. In two states the law provides that the holders of low-grade certificates are eligible to positions only when the supply of teachers with those of higher grade is exhausted. In another state, the holder of the lowest grade certificate must qualify within two years for one of higher grade. A number of states require applicants for renewals to attend one or more summer schools for teachers or otherwise obtain a minimum amount of professional training before the application is granted. Fifteen states do not renew the third or lowest grade certificate. Twelve renew only on evidence of completion of professional courses or attendance at institutes; six on completion of prescribed requirements of reading-circle work. The other fifteen states renew low-grade certificates on experience or at the discretion of the board or on recommendation of the superintendent.

Life certificates or certificates which may be converted into life certificates or renewed indefinitely can be obtained without prescribed academic or professional requirements, but solely on the basis of experience and satisfactory examination in thirteen states. In four more states, high school education only is necessary (in addition to experience and examination) for life license. In five states some professional training or qualifications satisfactory to the state board are essential. In the remaining 26, one or more years of professional training are necessary for life certificates.

These facts concerning the ease with which even the lowest grade certificates may be renewed in many states; the practice of renewing other low, if not the lowest grade certificate; and that of granting life certificates on examination in so many others show the possibility of candidates holding licenses and continuing to teach many years or even indefinitely without complying with fixed requirements of academic or professional preparation. It is not, of course, maintained that individual holders of such certificates may not or do not reach a high degree of efficiency as teachers.

The Power to Issue Certificates.

A careful survey of the laws and regulations of the different states and reasonable familiarity with practice show that standards for certification are so low that thousands of teachers in active service actually have no education beyond the elementary grades and one or two years of high school. Normal schools and colleges of education maintain courses leading to full or partial certification in practically all states. But the standards set up by these institutions and the requirements exacted on examination by certifying authorities have little relation to each other. There are at least two authorized standards, each quite independent of the other, even when uniformity within the state is established. When county or corresponding authorities issue certificates wholly or practically on their own initiative there are as many standards as there are certifying units. Conditions



MR. JEREMIAH RHODES
Superintendent of Schools-Elect,
San Antonio, Texas.

Mr. Rhodes, who succeeds Charles S. Meek, as head of the San Antonio schools, is a native of Ohio and has had broad experience as an educator. He began his work as a teacher in Missouri and has been superintendent in Kansas and Minnesota cities. In 1909 he became head of the state normal school at Keene, N. H., but resigned two years later to accept the superintendency at Pasadena, Calif.

of this kind are likely to result in an average standard which is low and uncertain.

There is a very marked tendency in the last decade to concentrate the certifying authority in the hands of state officials. From the early decentralized systems in which county authorities issued licenses of statewide validity, each with independent ideals and standards, the centralizing tendency has grown until now 26 states control and issue certificates of statewide validity. Seven other states control, thru giving questions and grading papers, making 33 states in which statewide unity exists and state authorities control the certifying power.

State uniformity and control of certifying authority promotes reciprocity among states and tends to establish higher standards of qualifications for licenses to teach. It follows logically and consistently the idea of state responsibility for education and of the training and supplying of competent teachers, as a state rather than local function. It seems reasonable to expect that the next step is to forego examinations as a means of entrance to the teaching profession. If they are continued the standards of qualification should be the same as or equivalent to those set up by the teacher training institutions of the state. In practice this means simply fixing the definite standard of graduation from normal schools or colleges of education or equivalent preparation as prerequisite for a teaching license. Possibly the minimum might be lower temporarily.

Good Time to Raise Requirements.

It may be contended that in the light of the present teacher shortage this is not the time to do this, but it should be remembered that delay in raising standards will inevitably be followed by a reaction toward continuing the present low salary scale. All, not a part of the teaching force must be worthy of increased salaries or a permanent professional basis cannot be established. Several states recently enacted laws for the purpose and avoided a possible depletion of the teaching force by proceeding to raise standards gradually. In one case the full effect of the law will not be in operation until 1935. In others the standards are being increased annually for a period of years, until the desired minimum is established. Experience in a number of states indicates that expected shortage does not usually follow the establishment of higher standards. Evidently the dignity and

promise and opportunity offered are so improved by increased standards as to add to the attractiveness in the eyes of the possible candidates.

Increased scholarship requirements established by law or by regulations of authorized boards apply to new applicants only and inflict no hardship or injustice on those holding certificates at the time of their enactment.

Besides the growing tendency to set up academic and professional prerequisites there are other indications of the increasing demand for higher scholarship requirements for teachers' certificates. There is a growing custom to issue all higher grade certificates on graduation from "approved" institutions of higher grade and to confine examination licenses to those of lower grade. Statewide minimum salary laws with wage scale based on the quality and amount of preparation and experience are in operation in several states—most of them of recent date. Finally an ever increasing number of states issue certificates requiring specialized preparation. The old custom of granting licenses of different grades, valid in all schools in a specific territory, is being superseded by a plan of granting special certificates for the particular subject or grade or class of work. In many states, special certificates for administration, supervision, kindergarten, primary, and elementary grades are required. This follows and necessitates the practice of specialized training in teacher training institutions and the demand for applicants so trained.

Higher Salaries Demand Better Qualifications.

Improved standards for teachers' certificates, quite inadequate as they are, have not been reached easily or rapidly, but as the result of prolonged effort on the part of those interested in the good of the schools and of the teaching profession. No pressure can be great enough or emergency urgent enough to justify a backward step in this direction. Higher standards of qualifications for licenses with salaries which justify the demands for them and which are at the same time commensurate with the importance of the responsibilities entrusted to teachers seem to offer the only relief and corrective for the present alarming situation which promises to be permanent in its effects.

It is not unreasonable to expect also that the serious question of recruiting students for teacher preparing institutions and courses would be solved by certification laws which require a fixed amount of academic and professional study either in the form of gradually increasing prerequisites or by the abolishment of the examination license. The examination method at best is no better than the indirect or expedient door to the teacher's desk. To assist candidates to enter thru this door; to make easier the access or otherwise to increase the number who use it does not appear to be the function of teacher training institutions or officials entrusted with the certification of teachers. The state can not logically maintain schools to prepare teachers and at the same time different machinery to assist candidates to avoid making the preparation. There is but one purpose of the two functions of preparing teachers and issuing licenses, namely to insure a qualified teacher for every school. Why then should they be opposed to each other in ideals and demands? It is true that in a few states both functions are controlled by one board, but even in these the standards are not always the same.

Salary, tho important, is not the only factor to be considered. We may overdo the salary propaganda; stress the unfavorable phases of teaching to the detriment of the service and forget our obligations in the matter of professional qualifications and ideals. It is the children we are considering, not the teachers. If

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Publicity Campaigns for Better School Support--I

Carter Alexander and W. W. Theisen of the Wisconsin State Department of Education

The Problem.

These are trying days for those charged with financing school systems. Out-of-date and overcrowded buildings, unseemly large classes, frequent resignations of the best teachers because of low salaries, the steadily lowering quality of the new teaching recruits, dissatisfied taxpayers, all evident in many places, testify to the fact. A school system with all the money it really needs is scarcely to be found.

In this critical situation the school board and the superintendent must be "good providers." Whatever else they undertake, they must first of all try to secure adequate financial support for the schools in their charge. Fortunately they may find a safe guide in the fundamental truth so well phrased by Superintendent Frank B. Cooper of Seattle: "When the people understand that funds are needed and have confidence in the school management, they show themselves willing to furnish the necessary funds."

Frequently school policy has been determined by the belief that the only thing necessary to secure this increased school support is for the board and superintendent to exercise their full powers. But can support that is ultimately better be secured thru the direct and relatively speedy decisions and acts of school authorities alone? Is it not rather to be sought thru arousing public opinion, a procedure which necessarily takes time and effort? More specifically, can school boards and superintendents count on deciding for themselves when bond issues and increased taxes for schools are imperative? Or are campaigns and "drives" for increased school support inevitable if the schools are to be adequately maintained?

Each of these two methods of procedure can cite for its side examples of apparent success in securing greater school support. But many communities whose school boards have gone ahead by themselves to raise school taxes, have later experienced a reaction which has left the school even worse off than at the start. Inevitably the observer wonders whether this reaction could not have been avoided by the board's taking pains to arouse the public to the need of the increased school expenditures before the increase was authorized. Accordingly it seems advisable to consider if without publicity campaigns there is a possibility of securing and retaining the greater school support needed at the present time. Whether such support is ordered by the school board or secured thru a publicity campaign, three things are clear: The schools must have more money, the amount should be adequate and the increase ought to be permanent. The answers to the questions raised will accordingly treat these three phases of increased school support in order.

Can Increased Support Be Secured Without Publicity Campaigns?

Increased funds for school support can in most cases come only from the pockets of local taxpayers. It is true that in a few states substantial amounts of state or national money are available for local districts. But to secure this outside money the district must, in nearly every case, raise more money locally than before. Often the extra sum to be raised locally must equal the new amount from the outside. For practical purposes, then, any increase in school support means that the local tax rate must be increased.

In actual practice this increase in the local school tax can be accomplished in only four ways. Some educational board may order the

increase on its own authority. Again, this educational board may induce some general board of control, e. g., a city council, to order the increase. Where a city has a special charter, the increase sometimes can be secured only with the approval of the legislature. Where the consent of the legislature must be obtained before the local school tax can be increased, that body practically always does as it believes the voters in the district desire. In most cases, however, there are limits beyond which it is unlawful for a school board or a city council to raise school taxes without a vote of authorization from the electors in the territory involved. For many school districts these limits were reached long ago.

In Wisconsin it is essential to have the voters convinced that increases in school taxes are advisable. In all cases of schools under the district organization—a form including all rural schools, all state graded schools and practically all of the smaller cities—the amount of school tax is determined by the electors at the annual district meeting. The special city school tax of 5.5 mills can in Wisconsin cities of the third and fourth classes be voted only by the city council which of course can best be influenced by public opinion. In cities bonds for school purposes cannot be issued without a popular vote, if ten per cent of the voters in the last general election request submission to the people.

Under present conditions in most school systems publicity campaigns are advisable in connection with all efforts to secure any increased school support.

Can Adequate Support Be Secured Without Publicity Campaigns?

Some school authorities sincerely believe that it is unnecessary to go to the public for anything except technical or legal approval on school expenditures. But numerous facts show that this view is unsound. We have too many cases of superintendents who have secured public authorization for increased school expenditures thru campaigns when their boards at first said it could not be done. Instances are fairly common of school systems so overcrowded, teachers so poorly paid, or the need of medical inspection and school nurses so evident that aggressive bodies of citizens have taken it upon themselves to look into conditions and to arouse the public to remedy them.

Up to 1900 it was comparatively easy to finance the public schools because only a cheap type of education was demanded and provided. Still, "The school truly constituted the chief interest of the majority of the taxpayers."

Since then the expansion of public school work in many lines has increased its cost enormously and at the same time there has been a huge increase in other government expenses. "What wonder, then, that when it becomes necessary to raise money for new improvements, the taxpayer asks if there isn't some other way to obtain it than by taking it out of his pocket-book?"

Again, the citizens who are called upon to pay the increased school costs have become accustomed to "drives" for large sums during the war period. They are likely now to ignore claims for money that are presented in a simple, quiet or unemphatic manner. The schools must compete with demands for good roads, street improvement, city buildings, higher salaries for

¹Talbert, Wm. E.: "To Bond or Not to Bond," Am. Sch. Bd. Jol., Apr., 1918, p. 21.

²Ibid.

city officials, and pleas from philanthropic or patriotic associations. All of these competing interests make elaborate and forceful campaigns for more money.

In addition to the constantly increasing and very severe pressure of taxes, the hardships due to high prices cause many people to hold back on any proposal to increase expenditures which affect their tax payments.

Finally, many schools are now running up to the full tax levies possible without a direct vote of the people.

There is probably not one school system in a hundred where the people can be induced to vote increased school taxes for the amount needed at the present time without a well directed and vigorous campaign of publicity.

Can Permanent Support Be Secured?

All experience indicates that permanent adequate support for schools is not to be had in a district unless the school policy is approved at times by a safe majority of the voters. To secure this majority, continuous general publicity work and special publicity campaigns at critical times are advisable. Superintendent Newlon of Lincoln, Neb., has well phrased this idea in a letter to the writers:

"Of course a school system must continually carry on the right sort of a publicity program. We were able to carry the bonds very largely due to the fact that for two years we have kept constantly before the people the need for new buildings. When we finally came to the proposition of issuing bonds, a sentiment had been built up in the community that was easily crystallized into a favorable vote."

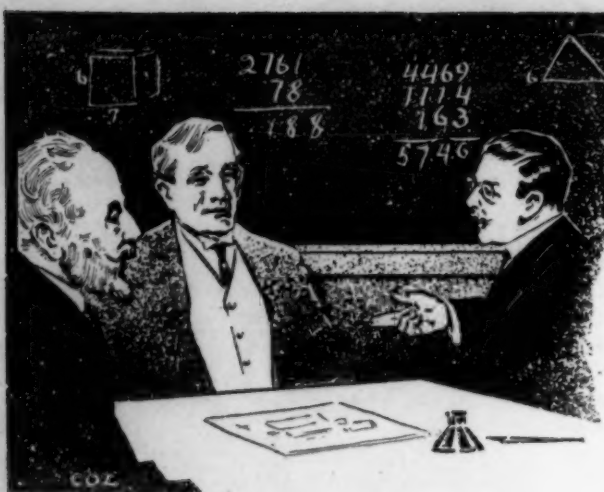
Not infrequently the public will bring to time a board that does not dare or wish to raise school taxes, for example, one dominated by a certain class of wealthy taxpayers. Again, there is nothing like an aroused public opinion for making a certain type of politician see the light. This is the politician on the school board who is running on a platform of economy, but only for economy in school expenditures, while graft and waste may run riot in other civic expenditures. If merely thoughtless or inclined to be a "trimmer," he will soon be brought to time. If obstinate, public opinion will defeat him when he comes up for reelection. For all such opposition in the board, votes will indicate more clearly than anything else what the public desires.

Even if the question of increasing school support is technically handled by some board under a continuous publicity program, a majority of the citizens will favor it, or at least not be opposed. Whatever explanations are necessary will thus be made in advance, voluntarily and in a way to command respect. *Ex post facto* explanations of a board on raising school taxes are necessarily apologetic or defensive. They do not inspire confidence in the administration making them and a school board without public confidence can do little to secure better school support in the future.

We may reasonably conclude, then, that in the long run whenever any considerable increase in school support is to be asked, the safest and most profitable course is to conduct a publicity campaign or at least a "campaign of education" on the matter.

To those school board members and superintendents who have regarded campaigns for increased school support as wholly unnecessary or even as an evil, a final word is advisable. A campaign of this sort if properly managed is

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How the Salary Schedule is Abused

Henry C. Shinn, Mt. Holly, N. J.

Until within the last few years no one thought much about teachers' salaries—except the teachers. The majority of school boards paid as little as they could, and the average citizen, unless he happened to have a member of the profession in his family, thought that teachers were well paid for working five or six hours a day, five days in the week, "with all summer to loaf."

It is unnecessary to discuss the cause of the change in public opinion. Perhaps the old law of supply and demand has been the principal factor in bringing about the almost universal willingness to increase the salaries of teachers. One of the most gratifying features of the movement is the sympathetic response of the taxpayers nearly everywhere. Many a school board member, who has, year after year, pared his budget to the limit, and answered the appeals of his teachers for a living wage by the assertion that "the taxpayers will not stand for any larger appropriation," has been surprised and pleased to learn that the taxpayers are glad to sanction large increases in salaries in his district.

It is unfortunately true that many school districts have not done as well as they should. Many communities still cling to the old-fashioned idea, and pitifully low salaries are still paid in many schools. But it must be remembered that the initiative in the matter rests with the board of education, and the teacher, no matter where she may be, and who is today receiving a salary that just about keeps body and soul together, is beginning to realize that, in fourteen of fifteen cases, the blame does not rest upon the taxpayers of the district, but upon the members of the school board, who are too indifferent, or too timid, to ask the people for the money that would enable them to pay her what she is worth and what she ought to receive.

There are exceptions to all rules; but, judging from the results of recent school elections in all parts of the country, it may be said that the general public is ready to help the teachers, and that, in a majority of low-salaried districts, the boards of education are to blame for the continuance of the existing conditions.

One example may be given: Early in the present year, a certain board of education went before the citizens with a request for an appropriation nearly double that of the preceding year. The increase was so alarming that the Chamber of Commerce of the town considered the matter, and had almost decided to defeat the appropriation, when the finance committee of the board was given a hearing. It was acknowledged that the enrollment of the schools had not increased materially, and that no new buildings were contemplated. However, when the board presented facts and figures about the low salaries that were being paid to teachers in that community, and announced that 90 per

cent of the increase in the appropriation would be devoted to raising those salaries, the business men approved the action of the board, and when election time came not one vote was cast against the budget!

This general increase in the amount of money available for teachers has brought school boards face to face with the problem of preparing new salary schedules, which must be fair to the teachers, and satisfactory to the taxpayers.

The problem was not a great one in the old days, when primary teachers began at \$500, and were given an increase of \$25 per year. The first four grades were grouped; then the next four, at a slightly larger minimum; and then came the high school, if the district boasted one. The teachers of each group were paid the same salary, and the board found it an easy matter to fix a schedule. But the old figures are obsolete, and a new schedule must be drafted.

The committee goes to work, and the three divisions of the old system are retained, and a minimum and maximum salary fixed for each group. Stated annual increases are established, to be based on the rating of the teacher by the supervising principal. Perhaps a bonus is offered to teachers who complete the term. Much thought is given to the preparation of the new schedule, and its compilers believe that it is fair to the teachers, and, incidentally, that it saves as much money for the district as possible. It sounds well when it is read at the meeting, and the board adopts it unanimously. The schedule is not perfect; but it would work satisfactorily if it were not for the human element, which so often enters into the relations between a board of education and its teachers, especially in small districts, and which frequently upsets all preconceived arrangements at salary-fixing time.

The schedule becomes known to the teachers, and Miss A, who has taught the sixth grade for five years, learns that she is to receive the same salary as Miss C, who was elected last year to teach in the same grade. So Miss A visits the superintendent, and inquires if her experience is to count for nothing. She is told that the schedule provides a certain salary for all sixth grade teachers; and she promptly proceeds to camp on the trail of the board members. She is received sympathetically, and the members talk over the situation at the next meeting.

"She's a good teacher and has been with us for five years," says one member. "What do you say if we give her \$50 more?"

Everybody agrees, and Miss A is satisfied.

But now Miss C starts on the war path. "Isn't my work just as good as Miss A's?" she demands.

"Yes, Miss C," replies the harassed superintendent. "But Miss A has more experience."

The retort comes quickly: "If my work is as good as hers I should be paid the same salary."

Miss C threatens to resign, and in self-defense the superintendent reports the situation to the board. By this time other teachers have presented similar complaints, and the board is fortunate if it finds a way out of its difficulties without losing two or three of its best teachers, and without creating a feeling of dissatisfaction among the staff which will injure the spirit of the school and hamper its efficiency.

In the foregoing instance, which is not an imaginary one, the first mistake was made in not recognizing experience as a factor in fixing the amount of an efficient teacher's salary. The second, and more serious error, was in breaking the schedule for the benefit of Miss A. Many school boards make the first mistake. Some member is sure to say that he pays the clerks in his store for what they do, not for the number of years they have worked there; and he sees no reason why school teachers should be treated differently. It is unfortunate that such an attitude is frequently held by a majority of the members. The second mistake is also frequently made, but the point is this: No salary schedule is of any value unless it represents the final decision of the board of education, and is so known and understood by the teachers. The schedule may be carefully prepared, or it may be thrown carelessly together, but if it is to be stretched to fit the complaint of a single teacher, or if it is to be binding only at the pleasure of the board, it is absolutely worthless and can do incalculable harm.

Lack of confidence in the superintendent or supervising principal is a frequent cause of abuse of the salary schedule. If the board is unwilling to accept the superintendent's rating of a teacher as final, it should employ a new principal. If a teacher is rated as B, and upon her complaint the board gives her the salary of an A teacher, dissatisfaction at the injustice of the act will spread through the entire system. The judgment of the superintendent has been ignored, and his authority in the school has received a blow; while the teachers will have just cause for feeling that the board has shown favoritism.

The ideal schedule has yet to be written. Mistakes will continue to be made, and perhaps injustice done. But the board should stick to its decision; or else revise its entire salary list. It will not do to make an exception of one teacher. If the schedule is to be changed, it must be changed entirely; not in a single instance. The board must know why a teacher is rated A or B; it must be certain that the rating is a just one; it should pay all its teachers what the schedule provides; and it should never allow sympathy to govern any of its actions. It is better to lose two or three teachers than upset the entire staff.

The very teacher who benefits by this schedule-breaking will be the first to complain about

(Concluded on Page 117)

S. G. Harwood, Formerly Business Superintendent, Duluth, Minn., Schools

S. G. Harwood, Formerly Business Superintendent, Duluth, Minn., Schools

We evolved a system for handling our supplies which saves the whole business office at least six weeks every year. The work involved in developing the system was so great and the results so satisfactory that we are glad to share the information with those who may not have the opportunity to work out a system of their own.

The reason for this is that paper is used by nearly every school department, instead of putting the paper used by each department in the department catalog, which would cause a great deal of duplication, we put all paper in one catalog and give one to each department using it. The same is true of "Office."

The catalog lists were compiled by the department heads and edited by the business superintendent. We decided to use the loose-leaf system for reasons that are too obvious to enumerate. Each department catalog is a separate entity having its own title and pages begin-

Form

BOARD OF EDUCATION

Duluth, Minn.

ARTICLE

TOTALS.

MANUAL TRAINING

1

DATE

MONTH

YEAR

DATE

MONTH

YEAR

| ARTICLE NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-----------------------|----|----|---|---|---|----|---|----|---|----|----|----|----|----|----|----|-----|----|-----|----|
| 1. AGRICULTURE | | | | | | | | | | | | | | | | | | | | |
| 2. ART | 10 | 5 | 1 | | | 5 | | 10 | | | | | | | | 30 | 5 | | | |
| 3. CHEMISTRY | | | | | | | | | | | | | | | | | | | | |
| 4. COMMERCIAL | | | | | | | | | | | | | | | | | | | | |
| 5. DEAF | | | | | | | | | | | | | | | | | | | | |
| 6. ENGINEERS & JAN | 10 | 20 | 1 | | | 30 | | 5 | | | | | | | | 10 | 40 | | 10 | |
| 7. HOME TRAINING | | | | | | | | | | | | | | | | | | | | |
| 8. KINDERGARTEN | | | | | | | | | | | | | | | | | | | | |
| 9. MANUAL TRAINING | 25 | 10 | 5 | | | 15 | | 25 | | 5 | | 10 | | | | 25 | 30 | | 100 | 5 |
| 10. MEDICAL | | | | | | | | | | | | | | | | | | | | |
| 11. MUSIC | | | | | | | | | | | | | | | | | | | | |
| 12. OPEN AIR | | | | | | | | | | | | | | | | | | | | |
| 13. OPPORTUNITY | 15 | 5 | | | | 10 | | 5 | | 30 | | | | | | 5 | | | 200 | |
| 14. OFFICE | | | | | | | | | | | | | | | | | | | | |
| 15. PENMANSHIP | | | | | | | | | | | | | | | | | | | | |
| 16. PHYSICS | | | | | | | | | | | | | | | | | | | | |
| 17. PHYSICAL TRAINING | | | | | | | | | | | | | | | | | | | | |
| 18. RECREATION | | | | | | | | | | | | | | | | | | | | |
| 19. REGULAR | | | | | | | | | | | | | | | | | | | | |
| 20. REPAIRS | 10 | 5 | | | | | | 30 | | | | 25 | | | | | 50 | | 500 | |
| 21. SPEECH DEFECT | | | | | | | | | | | | | | | | | | | | |
| 22. | | | | | | | | | | | | | | | | | | | | |
| 23. | | | | | | | | | | | | | | | | | | | | |
| 24. | | | | | | | | | | | | | | | | | | | | |
| 25. | | | | | | | | | | | | | | | | | | | | |
| 26. | | | | | | | | | | | | | | | | | | | | |
| 27. | | | | | | | | | | | | | | | | | | | | |
| 28. | | | | | | | | | | | | | | | | | | | | |
| 29. | | | | | | | | | | | | | | | | | | | | |
| 30. | | | | | | | | | | | | | | | | | | | | |
| TOTALS | 70 | 45 | 7 | | | 60 | | 75 | | 25 | | 35 | | | | 70 | 125 | | 810 | 5 |

Fig. 1. Summary Sheet for Listing Articles Used in Several Departments of the Schools.

Each sheet has numbers from 1 to 35. Thus the number of an article such as $\frac{1}{2} \times 1$ inch cotter pins (see Fig 2) is "M. T. 3-22." ("M. T." for manual training department; "3" for the page number and "22" for the line number.)

In January we send the manual training department as many manual training catalogs as there are teachers. The director gives each teacher one of the catalogs with instructions to

Form No. 1
BOARD OF EDUCATION
BOSTON, MASS.

SUPPLIES

MANUAL TRAINING

3

Date

Sheet Number

5764
P. O. Number

DEPARTMENT

| Art No. | DESCRIPTION | Number Required | Unit of Measure | Unit Price | Total Cost |
|---------|---|-----------------|-----------------|------------|------------|
| M.T. 1 | CONDULET BODIES. —Continued | | | | |
| 2 | Type "C," $\frac{1}{8}$ in. | | | | |
| 3 | Type "LB," $\frac{1}{8}$ in. | | | | |
| 4 | Type "LB," $\frac{1}{8}$ in. | | | | |
| 5 | Type "LF," $\frac{1}{8}$ in. | | | | |
| 6 | Type "LF," $\frac{1}{8}$ in. | | | | |
| 7 | Type "LL," $\frac{1}{8}$ in. | | | | |
| 8 | Type "LL," $\frac{1}{8}$ in. | | | | |
| 9 | Type "LB," $\frac{1}{8}$ in. | | | | |
| 10 | Type "LB," $\frac{1}{8}$ in. | | | | |
| 11 | COVERS. Northern Electric or equal. | | | | |
| 12 | Blank metal for conduit, Cat. No. 100. | | | | |
| 13 | Blank metal for conduit, No. 200. | | | | |
| 14 | Porcelain, 2 wire hole, No. 12. | | | | |
| 15 | Porcelain, 2 wire hole, No. 23. | | | | |
| 16 | COPPER, Sheet. Besley Co., Chicago, Ill. | | | | |
| 17 | $\frac{1}{8}$ in. thick. | | | | |
| 18 | $\frac{1}{8}$ in. thick. | | | | |
| 19 | COTTER PINS, Spring. Besley Co., Chicago, Ill. | | | | |
| 20 | $\frac{1}{8}$ x $\frac{1}{8}$ in. | | | | |
| 21 | $\frac{7}{8}$ x $\frac{1}{8}$ in. | | | | |
| 22 | $\frac{1}{2}$ x $\frac{1}{8}$ in. | | | | |
| 23 | $\frac{1}{2}$ x $\frac{1}{8}$ in. | | | | |
| 24 | $\frac{1}{2}$ x $\frac{1}{8}$ in. | | | | |
| 25 | $\frac{1}{2}$ x $\frac{1}{8}$ in. | | | | |
| 26 | $\frac{1}{2}$ x $\frac{1}{8}$ in. | | | | |
| 27 | $\frac{1}{2}$ x $\frac{1}{8}$ in. | | | | |
| 28 | $\frac{1}{2}$ x $\frac{1}{8}$ in. | | | | |
| 29 | CUTTERS, Armstrong steel, for turning tools. | | | | |
| 30 | $\frac{1}{2}$ in., 2 $\frac{1}{8}$ in. long. | | | | |
| 31 | $\frac{1}{2}$ in., 3 $\frac{1}{8}$ in. long. | | | | |
| 32 | $\frac{1}{2}$ in., 2 $\frac{1}{8}$ in. long. | | | | |
| 33 | Flats for planer and slotter tools, $\frac{1}{2}$ x $\frac{1}{8}$ x 2 $\frac{1}{8}$ in. | | | | |
| 34 | Flats for planer and slotter tools, $\frac{1}{2}$ x $\frac{1}{8}$ x 4 $\frac{1}{8}$ in. | | | | |
| 35 | CUTTERS for Huntington emery wheel dressers. | | | | |
| | TOTALS | | | | |

Fig. 2. Form Used for Listing Supplies by Departments.

[illegible]

Fig. 5. Form for Keeping Check on Quantities Purchased.

THE SCHOOL CAFETERIA

R. H. Thomas, School Clerk and Business Manager, Portland, Ore.

A dictionary published in 1919 defines a United States cafeteria as "A restaurant or cafe at which the patrons serve themselves with food kept at counters, taking the food to small tables to eat." Thomas Babington Macaulay refers to this type of place, in the early part of the nineteenth century, as a coffee house. I found one dictionary which defined the cafeteria as a bar room. The present popularity of the cafeteria may be due to the recent national dry spell, which practically abolished what some people in this country may remember as free lunch counters.

The Underlying Theory.

Lunch rooms establish themselves at points convenient to the hungry. I am told that one of the greatest restaurant systems in this country actually counts the number of passing pedestrians at various prospective locations during certain hours for indispensable data before taking a lease. It is to be expected that at least one shop will spring up near every schoolhouse, in which children are invited to exchange their pennies for cheap candy and other indigestible stuffs. If parents knew how much castor oil and loss of sleep are chargeable to these one-horse stands, most of the stands would soon display for rent signs. Cheap candy deserves unpopularity, but the mercenary corner shop is still with us, and children still patronize it, notwithstanding the advices of parents and teachers. With a noon-day lunch of this sort swallowed in haste every school day during the winter, is it any wonder that children look pale and act listless at the end of the school year? Physicians declare that food is most digestible when served at or near the body temperature of 98 3/5 degrees. This is especially true of growing youth doing the double duty of developing both brain and physique. Many a mother insists that her youngster come home for hot noon-day lunch. So far as she may know, it may be the exercise, or the air, or the home atmosphere, but she is satisfied that the school year goes better.

Desirability of Cafeterias.

Granting that hot lunches for school children are at least desirable, analysis of school conditions follows. In general there are in each city of any size two classes of schools—elementary and secondary. The elementary school is commonly located within a mile of another one of its kind. This insures that few children will be required to walk to school a greater distance than half a mile. The noon intermission usually exceeds an hour. The average man easily walks four miles an hour. The average youngster just out of school easily exceeds all pedestrian speed limits on the way home to eat. Ten minutes will probably see most youngsters at the home dining table. Children usually eat a good noon-day luncheon inside of thirty minutes. It undoubtedly takes twice as long to get back to school as it did to hie home from school; that is, twenty minutes. Thus an hour and a hot lunch have passed satisfactorily into history.

Unfortunately, school yards seldom contain the one hundred square feet per pupil declared by playground experts to be necessary, and are often increased by the roping off of adjoining streets. Indeed, the idea is gaining impetus that park playgrounds are matters for city authorities to provide and maintain rather than for school authorities. These usually inadequate school yards are, therefore, crowded during general play periods, supervision is difficult, and accidents are common. Yard duty, which

often includes street duty, is consequently trying on teachers, especially during a long noon hour as noisy youngsters run each other down in their hilarious enthusiasm. It will be remembered also that each pupil and each supervisory teacher had probably bolted a cold lunch. Also, I am informed that the long noon hour was primarily recognized as needed for home going for hot luncheon in elementary school management.

It would seem, then, to be good practice to not establish hot lunch facilities for children in elementary schools. They are not especially needed by the comparatively few lunch pupils who remain on the premises at noon hours. The good women in an elementary school community usually start the hot lunch idea. The community school garden provides the vegetables and the good women the service. It starts off with a flourish of trumpets. Then unforeseen difficulties appear; purchases of pupils never pay running expenses; differences of opinion develop among the leaders; the newness wears off; donations discontinue; patronage ceases, and the end is at hand. Upon one occasion I saw an investment by the school board of approximately \$1,700 live about three years. This was the longest lived elementary school cafeteria I ever saw, and I have helped christen several, bury them all, and pay the funeral expenses.

The secondary school situation possesses other and different factors. High schools generally accommodate a greater number of students. These students gather from a larger territorial area; the luncheon period is commonly less than half an hour—too short for noon home going; the kind and quality of food required by the attendant adolescent youth is different, and palates to be pleased are more expensive and discriminating. The entire situation would seem to suggest the advisability of quick service lunch rooms for the accommodation of a large volume of guests who wish warm calories at reasonable prices. Quick service and low costs do not go with the ordinary restaurant. The cafeteria is the only solution.

Their Legality.

Being duly satisfied that the equities favor the secondary school, and being advised that the custom of providing warm meals at school in this country began with the high school, it is proper to see upon what legal authority these school lunches are based. Public sentiment travels in advance of legalized sentiment. The former makes the laws. In these days of insistent demands upon public institutions, it is well to be sure of legal footing. Most school systems have an attorney.

About two years ago I had occasion to ask the attorney of the Portland school district if the school board had authority to spend money for the purchase of milk to be given students, adjudged by some proper inspector to be undernourished. He replied, "We are clearly of the opinion that the board has no authority to expend public moneys in the feeding and care of pupils, even to the extent indicated in your question." I followed this by asking if the board had the legal right to allow a portion of a schoolhouse to be used for a cafeteria, upon concession or by direct operation. In reply he said: "The school board cannot rent a portion of a building occupied for school purposes to concessionaries whose business comes in conflict with the other tradesmen in the community. However, should the cafeterias be conducted in conjunction with the domestic science work, without expense to the district, and prove to be an accommodation to the pupils, we are of the opinion

that they may be lawfully allowed to exist in the schools."

And thus by narrow margins do many of our institutions endure.

Location in the School.

A school cafeteria must have a definite geographical location. It should be as convenient to its patrons as the commercial cafeteria, otherwise the evil of the "hot-dog" counter across the street and the popcorn wagon at the curb is likely to grow from irritation to exasperation.

And the theorists have their innings. Says Number One: The basement is the logical place. It is out of the way; you can arrange its kitchens under space saving sidewalks if deemed advisable; it is close to gas, water, electric, sewer and heating service; easily accessible to tradesmen and patrons; it occupies areas not especially coveted for educational work; and it usually benefits by desirable overhead natural light.

Says Number Two: Some upper floor is the logical place. Dish rattles float harmlessly above the school work; pungent cooking flavors of garlic and its friends do not assail the refined society nostrils; ventilation is certain under all weather conditions; natural lighting is assured; heavy pillars are not in the way; the dumb waiter occupies practically no lower floor space, and expensive excavation under walkways is avoided.

Says Number Three: The first floor is the logical place. Patrons do not enjoy eating in a stale-smelling cellar; nor do they hanker for an appetizing climb up a long stairway for a frankfurter sausage; warm lunch is most desirable for youth, but he won't go far to get it; if the bulletin menu isn't near enough to stumble over, the youthful patron eats a cold pocket lunch; such attractive culinary odors as escape the kitchen and gratuitously attack his olfactories are correspondence courses in advertising; all cafeteria supplies and wastes are inexpensively moved; indeed, the motto of any school with its cafeteria on the main floor could be that of a strong mind in a strong body.

Says Number Four: An outside building, or a detached wing, is the logical place. The cafeteria has minor rights in the school building; it is merely a physical auxiliary to an educational system; the objectionable cooking odors before lunch and offensive garbage odors and exposures after lunch do not disturb the sensitive student's school hours; it is as desirable that eating rooms should be separated from teaching rooms as that eating rooms should be separated from sleeping rooms—each has its proper place, but they are not together.

Now, what do you think? Which one of this quartet do you prefer? I have seen cafeteria service under each condition, and it worked well in each case. To my notion, it should be as convenient to patrons as the competing "hot dog" counter. To most cafeteria managers that means lower floors or basements. Insisting on this idea, the location can then be left to the architect. Much depends on the shape and size and topography of the school site, the type and size of the building, and the character of its construction. The educational arrangement of the building should be first accommodated and the cafeteria given second consideration. It is entitled to nothing more.

Cafeteria Arrangement.

Adolescent girls eat more varieties of foods than adolescent boys. There are some high school love affairs which have been known to thrive in a cafeteria. There are some high school students of each sex who have no use for

high school students of the other sex. Therefore, for time and space economy in food distribution, to prevent certain over-sociality, and to insure the patronage of the unsocial, the mixing of the sexes is not advised. Separate lunch rooms for each can be satisfactorily arranged with a needed pass pantry between, so that shortage or surplus on either side may be readily adjusted.

The interior of a cafeteria demands preliminary study. It is as easy to arrange properly at first as to mess up. Renovations are expensive. Steam tables and counters for display should be within easy range of the eye and within easy reach of the hand, but far enough from the tray line to prevent the human giraffe from poking his examining nose into steam kettles. When I see a patron sputtering into the spaghetti close up like a woman sniffs her smelling salts, I feel like jamming his head into it.

Sufficient tray lines should be provided to prevent any considerable service delays. Youth is impatient and long waits cost patronage. Checkers' and cashiers' desks should be together directly at the end of the counters. Payment should precede the eating. Whether payment is made by previously purchased slugs or tags, or in money, depends upon conditions. Students seem pleased to do anything to expedite service.

Kitchen and Dining Equipment.

Cafeteria equipment is standard. Steam tables, ranges, dishwashers, kitchen utensils and the like properly installed comprise the service end, all to be in such quantities as the numbers to be served will warrant. Ten or twelve-foot tables of two-foot width are economical. If desired, they may be made collapsible by hinges and mounted on horses. Solid tables are best. Good individual stools without backs are recommended. The entire layout should be made for more or less rough usage—plain, substantial, compact, serviceable. It is to be remembered that students enter the place to enjoy the carving and not the frescoing. A cafeteria is not an art gallery.

So far nothing has been advanced to indicate who should pay for all this. It may not be difficult to convince the inveterate taxpayer that the building, and perhaps the permanent installations, might properly be a claim against the school funds, but the perishable dishes—how about them? The building is a school occupied for school purposes; our attorney advises that it cannot be rented, that the cafeteria must somehow be run in conjunction with the educational work in domestic science, that supplies and perishables are provided for other educational work from school funds, so it all goes in. Thus our cafeteria is legalized, built and furnished, and awaits the magic hand of its manager to breathe into its steam-heated nostrils the breath of life.

Types of Management.

Now is the time to ask what type of management to select. We remember that once we saw a school cafeteria operated under a concession. Disregarding for a moment the opinion of our attorney that such a method was not legal, we indulge in a carnival of reminiscence. We recall the concession was conducted for profit alone. The smallest portion for the least cost that would hold the patrons was the rule. The patron's eye and palate were to be pleased—no thought was given to pleasing the stomach and no idea of food values existed. We heard the cooks prate of "tricks" and "substitution" and "stock pot economy." We remember upon inquiry that friend concessionaire illustrated a "trick" by working overstrong butter in sweet milk; illustrated "substitution" by using powdered milk and powdered egg instead of real milk and real eggs; and illustrated "stock pot economy" by making a concoction of the uncut meats from the departed patrons' leavings. No

cooperation was ever established with the domestic science work, and the bill of fare staled by frequent repetitions still lives in our memory. The equipment was run down when the contract term expired and we recall that after several attempts adjustment of shortage in inventory furnishings was only made after his bondsmen were called upon to make good. We were glad our attorney pronounced his occupancy illegal.

Confronted with these items of negative interest, it logically follows that the pendulum should swing to the other extreme of passing the entire system to the domestic science faculty to operate. Extensive and expensive alterations are at once made, additional equipment is secured and the faculty has before it a perfectly modern outfit. Scientific menus now meet the student's eye, and, under skilled supervision, the applied science of food improves the practical output. Domestic science classes are introduced to the commercial end of the school world. The fraternal interest of teachers in the undertakings of their associates vocally advertises to the students the purely school nature of the enterprise and patronage logically develops. The school principal schedules the supervising teacher a period or two from instruction work to study up menus, order supplies, check up bills, inspect the food, instruct the head woman, arrange for student help, call the garbage man, deposit the receipts, pay the cooks, and do the 57 varieties of supervisory stunts; and this plan is in full swing, working well.

This scheme affords real opportunities for the education of high school students in proper food selections, which is what the experts term "good eating habits." One of the most advanced scientific attempts reported is that of the Julia Richman High School in New York City, whose menu bulletin introduces its compendious self with the *Nota bene*, "You require 800 balanced calories for lunch. Purchase the items which give you this quantity."

But even a limousine may develop a squeak, and this theoretical arrangement is also of human origin. The preparation of scientific menus absorbs attention to the exclusion of market conditions, and sudden advance in prices is prone to find a victim here. A high school commercial department is to do the bookkeeping, but it doesn't. Educational provisions for class inspections of food are hurried or prevented by circumstances; class cookery cannot always be assured, as attendance fluctuates; applications in domestic science courses begin to wane; and a woman "straw boss" must be always on the job. The practical details so obtrude upon the theoretical that in the end animated scientific helps in good eating habits are minimized and a high salaried educator is devoting much time not included in the overhead cost sheets to duties capable of being performed by a less expensive operative. Just here a practical school superintendent probably notified his board that

I am glad that I am a teacher, and yet occasionally some good friend attempts to commiserate with me because I am a teacher, by pointing out to me that in some other line of work, perhaps, I would have more material wealth, more leisure, more independence, more pleasure. Now I am aware that teaching has its boundaries and at times offers restrictions that are a little irksome—but this is true of every other worthy calling in life, in fact it is incident to life itself; and the teacher in his vocation should find fullest opportunity for the exercise of the highest and best qualities of life. His is no deadening routine; the possibilities of his labors are boundless. No teacher ever yet was so great that he did not find in teaching, exigencies for which his skill and greatness did not suffice. Yes, it's a great thing to teach school; it's a wonderful thing to be a teacher.—Frank W. Simmonds, Superintendent, Lewiston, Ida., Schools.

as they are handled, the cafeterias are not educational in any sense and take up considerable time of the teachers. I have read in the autobiography of some school district that such a condition as this did once actually exist, and that three months before the close of the school year the school cafeterias were transferred to the business department to work out a third plan for all except for a girls' vocational school, in which large classes were taught commercial cookery.

Some Examples of Management.

I asked for figures, which, when they came to hand, showed in the case mentioned a net gain during the seven months the cafeterias were operated by the domestic science faculty of \$276.26, or an average of \$39.46 per month. The net gain on the same cafeterias operated by the business department for the three following months was \$390.92, or an average of \$130.92 per month. The average difference of \$90.84 per month is in favor of the business management. There was no change made in the organization or help except that the wages of head operatives were increased by the business management. Each of these groups of figures includes its proportionate part of heat, light, water, janitor service and other building expenses. These figures are not presented as an argument for profits; they merely illustrate different results from the same organization under different methods.

Some time ago a party of school officials visited a cafeteria operated by the teachers in vocational cookery, copied the menu and noted the size of portions served for prices set out. Their especial attention was called to the prices, which were said to be lower than those in the business managed cafeterias, because the students did the bulk of the cooking, and which made it possible to get along with the minimum of employed help. The following day this party visited a school business managed cafeteria. The number of items for choice were exactly twice those offered in the vocational school cafeteria. Prices were all the same for corresponding items except in four instances. In one of these, the price was less than in the vocational school cafeteria, and in the other three the portions were larger corresponding to a larger price. So, as a business proposition applied to a cafeteria, student classwork, even on a commercial basis, is not the acknowledged remedy for the high cost of living.

It may not be improper to remark here that this is no fault of the teachers. They are a hard-working, efficient bunch loaded to the guards with facts but neither you nor they nor I can teach a thing and put out a commercially profitable product at the same time. Education is their line—not skill in quantity production.

Practical Points in Operation.

The cafeteria should not be conducted for profit. If the surplus exceeds the cost of operation and maintenance and betterments lower some of the selling prices. A small margin is always a good thing. With it new and modern equipment is assured and these are all properly chargeable to the cafeteria revenues.

Uniform prices for the same foods should prevail in all the cafeterias in a school system. In fact any relatively fixed standard promotes a proper spirit of thrift in each cafeteria whose management must make good under the same conditions as others.

Cooperation with the school must be satisfactory. A pleased faculty can throw much good cheer into the situation. The student body can easily be interested by securing the popular ones in various organizations to themselves be or recommended others for the needed student help. The domestic science teachers can be supplied with their cooking materials for class instruction. Students preparing dishes may be given

practice in cost figuring and their output sold in the cafeteria. Domestic science instructors have been criticised the country over for teaching so-called "dab" cookery—portions too small for one sometimes. This is the place to teach quantity cooking for family portions and to be sure the output is economically used. Private homes and special parties and even hotels and restaurants are not steady or satisfactory buyers at the school delicatessen. Cooking classes for other than "dab" portions must have some place to use their perishable output in these days of high prices.

Buying of perishables is a proper duty of the individual cafeteria management. Staple materials should be secured thru the regular school purchasing channels. This gives the markets constant attention and needed supplies are provided from day to day or are secured in quantity and stocked as prices warrant. This is very important. The whole scheme of economic buying upon the extensive school credit is here brought to support the cafeteria in its every item however small.

Ordinarily a cafeteria is doing an average business if it is patronized by from one-sixth to one-third of the daily attendance. Greater proportions are expressions of approbation. Patronage is encouraged and the appetite is favored by such things as spotless tables, knowledge that cleanliness is behind the scenes, attractive conversation and proper decorations.

Diet and Menus.

High consideration should be given to food values adapted to adolescent youth. Emphasis should fall on foods rich in growth substances. The following are suggestions:

1. Encourage milk as a drink and in foods. There is no food value in skimmed milk. Cocoa is good. It has a milk basis. Discourage coffee.
2. Provide fruits. Fresh fruits are preferable but are not so popular as canned fruits.
3. Fruit salads are popular with girls. Use no high seasoning. Avoid rich fish or meat salads with mayonnaise.
4. Use meat in moderate amounts. It is the most expensive item on the menu. Keep the quantity to within one-seventh or one-sixth of

the total food needed. Avoid too many kinds of meat at one meal and do not provide the highest priced meats too often. Substitute cheese in macaroni or in hominy or in rice or in sandwiches.

5. Supply bread made of different flours. If raisins or dates or walnuts are incorporated, or if sprinkled with cinnamon or sugar, it is more attractive. Bread generally should be cold.

6. For dessert, provide bread or cereal puddings or custards. Pies and cakes are more saleable, but possess much less food values.

I am told that a calorie is the amount of heat required to raise one pound of water four degrees Fahrenheit, and that about 2,500 are needed in food each day for a high school youngster. Food specialists have tested and tabulated the caloric value of various eatables. There is nothing to prevent any intelligent operative from making up menus to any reasonable length by following three simple rules:

First. Select low cost foods of high nutritive value.

Second. Plan from them meals which will satisfy the palate and fulfill the requirements of a balanced menu.

Third. Compute the cost.

Avoid serving two dishes in the same meal which enjoy the same general character, whatever the form of each, such as tomato soup and tomato salad.

Sometimes a little psychology works well. To illustrate: Two dishes of macaroni were made just alike. One was dotted with bits of bright red pimento. All of this dish was sold before even one order was taken for the other. Gelatines were prepared an attractive pink with fruit coloring. Beside them were placed others richer in fruit, but uncolored. The pink went first. Cottage cheese was provided in the same manner, except for a small diamond shaped bit of red pepper on top of half of the dishes. The same result is reported. Truly, there must be Indian blood in every youngster.

There is once in a while available a manager possessed of the fine art of arranging cafeteria wares so they advertise their own merits. As

Fairholt expressed it, "The opposition of varied forms and colors which by their own juxtaposition more vividly express each other's peculiarities." Witness a red baked apple with pale cream, alternating with lemon pie; a pink jello alternating with apple pie; combining a colorless fruit salad with a bright tomato salad.

It is also to be remembered that Pandora did not die of curiosity. Her descendants fill the earth. If you doubt it, take a pan of common croquettes and place upon it the placard, "Surprise Croquettes," and see how quickly they are sold. And the beauty of it is that you have pleasantly induced the youngsters to eat what they like, and that which is good for what ails them—whatever that is.

A SUPPLEMENTARY SUGGESTION.

Fletcher Harper Swift.

Despite the soundness of the principles and policies advocated in my article in the May Journal, it would be unwise to ignore the fact that there are states in which it will undoubtedly prove impractical, if not impossible, to put these policies into effect. It is scarcely to be expected that Massachusetts, which today derives more than ninety-seven per cent of her school moneys from local taxation, and which for centuries has placed an overwhelming proportion of responsibility, both for the support and for the control of schools, with local units, will be able overnight to reverse policies and customs of immemorial lineage. Conditions similar, though less marked in degree, are to be found in a number of other states as well. How shall they be met?

A detailed answer is not possible here, but at least two policies may be suggested: (1) let the state furnish for every community a sufficient per cent of the total cost of the public schools to enable the state to control the local situation as far as it relates to the quality and quantity of instruction per child; (2) let the state department of education be provided with a school equalization fund in addition to all other school funds, sufficient to enable the state to even out all inequalities of school financial burdens. The first of these proposals involves the formulating of a scientific and just method of apportioning school moneys and the establishment of definite requirements to be fulfilled by the local units as conditions of state grants. The discussion of these topics must, however, be reserved for treatment in some subsequent article.



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STRANGE SCHOOLS IN STRANGE LANDS.

A Mission School in Shanghai, China.

Pupils in a High School at Manila, Philippine Islands.

Unit System of Heating and Ventilating

H. E. Westover, Chief Engineer, Board of Education, St. Joseph, Mo.

In the early spring of 1919, it was decided to install a new heating and ventilating system in one of the older St. Joseph school buildings that had been served for several years by a central fan system with hot air furnaces. This building had eight classrooms on two floors, the entire basement being taken up by boys' and girls' toilet rooms, and the heating equipment. This equipment consisted of four hot air tubular furnaces with a motor driven fan of ap-

proximately ten thousand cubic feet per minute capacity.



PLATE A.

proximately ten thousand cubic feet per minute capacity.

These four furnaces with plenum chamber, fresh-air-supply room, fan room and coal storage occupied the major portion of the basement. The fresh air was taken thru two windows at one side and to the rear of the furnaces, and as these windows were near the ground level, there was a constant trouble and annoyance from trash and dirt which got into the air supply. The heat ducts had been originally installed largely as the tinsmith saw fit, with the result that the air distribution was very uneven.

In considering the different questions incident to the installation of a new plant, it was realized that the location of the fresh-air supply would have to be changed and the entire duct system remodeled. It was this condition that first led the writer to consider the possibility of installing some type of direct steam heating, with mechanical ventilation to be secured without expensive duct reconstruction. At that time, however, the principle of unit heating and ventilating had not been called to his attention.

Before any definite conclusion had been reached, the writer heard of the unit system of ventilation as it was then being used in the east in conjunction with direct radiation. This

seemed to offer possibilities, and letters of inquiry were sent to a number of users. The replies to all of these were so favorable that it was deemed advisable to follow up the inquiries with a personal investigation.

In the course of this investigation about fifteen plants in six different cities were visited and all were found to be giving satisfaction. All of these plants were using the unit system for ventilation only, depending upon auxiliary direct radiation to meet heating requirements. The point upon which the writer had the most doubt was the ability of the machine to furnish the necessary amount of air without an attendant noise that would be a detriment to classroom work. In all of the machines seen, this difficulty had been overcome.

The net result of this investigation was the decision to install the unit system in the building in question with the important chance of having all heating and ventilating handled by one unit without any direct radiation.

This installation was made in the summer of

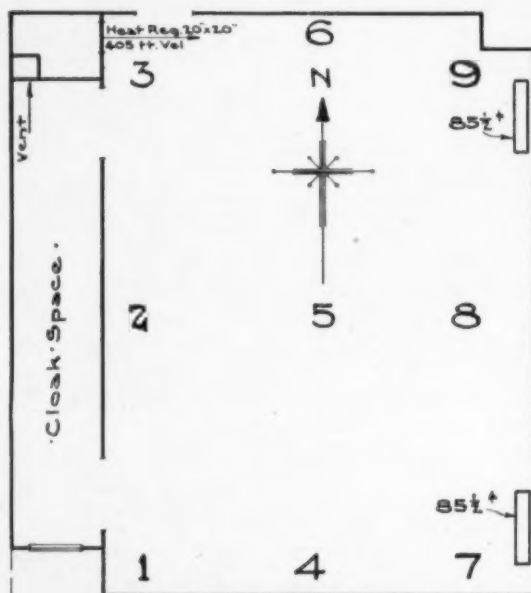


Plate 1

| Temperature Readings | | | | |
|----------------------|------------------|------------------|------------------|---------------------------------|
| Station | 6 in. From Floor | 5 ft. From Floor | 9 ft. From Floor | Greatest Temperature Difference |
| 1 | 64 | 70 | 76 | 12 |
| 2 | 66 | 73 | 75 | 9 |
| 3 | 66 | 72 | 77 | 11 |
| 4 | 65 | 72 | 77 | 12 |
| 5 | 66 | 71 | 78 | 12 |
| 6 | 67 | 71 | 76 | 9 |
| 7 | 66 | 72 | 76 | 10 |
| 8 | 66 | 70 | 78 | 10 |
| 9 | 69 | 72 | 78 | 9 |

FIG. 1.

1919 and the plant put into operation in early September.

With the exception of a short shut-down during the coal shortage, the plant has been in continuous operation ever since. The results obtained have fully equalled expectations and up to the present time no reasons have been given to make the writer regret his decision. It is unfortunate that there has been no opportunity given for a test of this system at extremely low temperatures, as the minimum encountered was only five degrees above zero.

The fear of possible objectionable noise from the machines has not been realized in any degree. All instructors in the school are well pleased with the system and unite in saying that they prefer it to any other that they have encountered. The fact that they can see for themselves that they are getting fresh air direct from outdoors makes a strong appeal. The writer has yet to meet the teacher who will realize that it is possible to get fresh air from a pipe that comes out of a wall. All explanations and arguments still leave teachers skeptical.



PLATE C.

An incidental advantage that was secured from this installation was the releasing for other purposes of the space originally occupied by heating equipment. One large room has thus been made available for manual training.

Altho this plant seemed to be entirely satisfactory, the writer desired to get some definite data on its performance as compared with other types in order to base recommendations for future installations. It was not a mere question as to the ability to provide sufficient heat as this can be easily handled. The main point was: Which system would give the most efficient ventilation at all times and under all conditions? It is not sufficient to pour a given quantity of fresh air into a room in a stated period of time, but the fresh air must also be equally distributed to all parts of the room and this raises an entirely different problem.

The true index of this distribution of air supply or diffusion, is the maintenance of equal temperatures at different distances from the floor line and at different parts of the classroom.

In order to make a test as to this condition, a standard was arranged to carry three thermometers, one six inches above the floor, one five feet and one nine feet. The plants to be tested were the best of their types in the district. Care



PLATE D.



PLATE B.

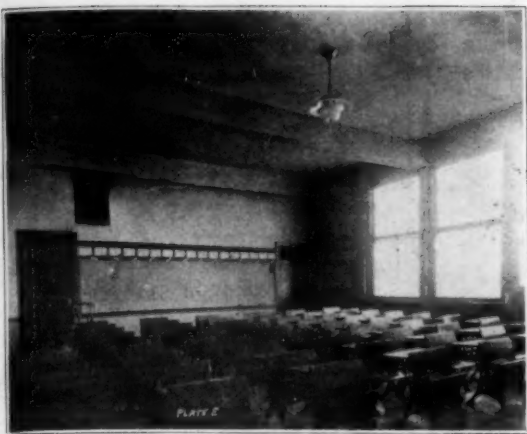


PLATE E.

was taken in all cases to see that air leakage was not excessive. It is not contended that the conditions found could not be improved by changes in plant design, but these conditions did exist in plants that were supposed to be all that could be desired.

The plates that follow are largely self-explanatory but a brief discussion of the salient features is deemed advisable.

The first plant to be tested was that in operation at the Bliss school, a comparatively new building, erected in the summer of 1916. This was of the split system type and had never failed to furnish all necessary heat, and very few complaints had ever been made as to foul air. The room selected was on the first floor, southeast corner, and the tests were made immediately after the dismissal of classes in the afternoon.

Fig. 1 shows the general arrangement of this room, together with the locations of the stations where temperature readings were made. The location and size of the heat register and the direct radiation are also shown. The readings at each station were made simultaneously, and the uniformity of the room temperature was checked by an auxiliary thermometer.

These readings showed an almost uniform variation at the different heights as well as a fair uniformity in all parts of the room at the same level. The readings indicated such a decided stratification that it was decided to make smoke tests and to endeavor to photograph the results.

With this end in view a camera was placed at Station 1 and an exposure was made before the ignition of the smoke bombs. This picture is marked Plate A. Two smoke bombs were then placed on the bottom of the heat register and simultaneously ignited. Plate B was made thirty seconds thereafter and plainly shows the heavy cloud of smoke in the corner near the register with already a lighter cloud near the windows. No diffusion in the room could be detected at this time. Plate C was made one minute and thirty seconds after Plate B, and at that time there was fairly good

diffusion over most of the room with the exception of the corner where the camera was located. Counter currents over the direct radiation were noticed, but the camera failed to get them.

Plate D was made three minutes and fifteen seconds after Plate C and by that time the diffusion was fairly uniform and the smoke was beginning to dissipate. No active lines of air travel could be observed except over the direct radiation and a slight movement thru the cloakroom doors next to the vent register. The whole

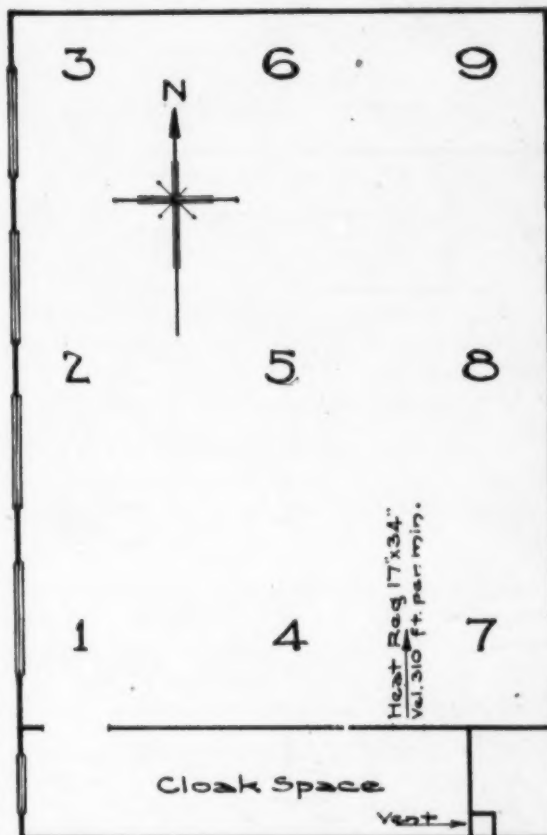


Plate 2

Temperature Readings

| Station | 6 in. From Floor | 5 Ft. From Floor | 9 Ft. From Floor | Greatest Temperature Difference. |
|---------|------------------------|------------------------|------------------------|--|
| 1 | 67 | 70 | 72 | 5 |
| 2 | 67 | 70 | 74 | 7 |
| 3 | 66 | 70 | 73 | 7 |
| 4 | 68 | 71 | 77 | 9 |
| 5 | 67 | 71 | 77 | 10 |
| 6 | 67 | 70 | 76 | 9 |
| 7 | 69 | 71 | 78 | 9 |
| 8 | 68 | 71 | 78 | 10 |
| 9 | 67 | 72 | 78 | 11 |

FIG. 2.

appearance of the smoke was that of a still fog. No stratification could be detected. The air volume and velocity were as noted.

The second plant to be tested was that in operation at the Washington school, one of our best buildings, and the results from this plant had been entirely satisfactory to the patrons and teaching staff. It was of the plenum type, air being supplied from a central fan. The room selected was near the center of the building and on the west side. This was made at the same time of day as the first one. Fig. 2 shows the general arrangement of the room, together with the location of the stations where temperature readings were made and the size and location of the heat register. The volume of air supplied



PLATE G.

to this room was slightly in excess of that found in the first test, altho the velocity was less. The readings were made in the same manner as in the first case and the results found were largely similar. In making the smoke test, the bombs were placed in the same relative position in the heat register. The camera was located near Station 9 and an exposure was made before the ignition of the bombs is shown in Plate E.

Plate F was made thirty seconds after the ignition of the bombs and plainly shows the manner in which the smoke cloud hugged the ceiling and worked toward the cold window surface. The smoke can also be seen just starting over the top of the cloakroom door on its way to the vent register. Plate G was made two minutes after Plate F and shows the major portion of the smoke cloud in the upper half of the room and towards the windows. The stratification is plainly shown together with the strong tendency towards the cloakroom doors, with a corresponding lack of movement towards the camera.

Plate H was made three minutes and fifteen seconds after Plate G and at the time of maximum density and uniformity of the smoke cloud, taking the room as a whole. The stratification is still plainly evident, extending almost entirely across the room. There were other smaller strata in various parts of the room that the camera failed to catch. At no time did the smoke cloud approach average density near the camera and along the east wall. With the exception of the pull over and under the cloakroom door, there was no appreciable air travel. The smoke had the same still fog characteristic with the exception of very pronounced stratification.

The third plant to be tested was that in the Jackson school, the poorest building from a construction point of view of any of the three. While the sash had been weather stripped to prevent air leakage, there was still some leakage around the window frames. This plant was of the unit type as described in the first part of this article. The room selected was in the



PLATE F.



PLATE H.

SCHOOL BOARD JOURNAL



PLATE I.

northwest corner, and the tests were made at the same time of day as the others.

Fig 3 shows the general arrangement of the room, together with the location of the stations where the temperature readings were made and also the location of the unit machine. The volume of air supplied to this room was just 1,200 cubic feet per minute, a mean between the other two.

As noted on the sketch, the air velocity was very high, and the effect of this on the temperature readings was soon apparent. As shown by the tabulations, the maximum variation between six inches and nine feet from the floor was only four degrees, and this occurred only near the windows. This was probably accounted for by the pull of the cold window surface and the subsequent chilling from the sash leakage. At no other point in the room was the variation over two degrees.

In making the smoke test, the bombs were suspended over the air outlet from the machine and directly in the current of air travel. The camera was located at Station 9 and Plate 1 shows the arrangement before the ignition of the bombs.

Plate J was made fifteen seconds after the ignition of the bombs and shows the heavy volume of smoke on the ceiling and in the upper part of the room. Plate K was made 45 seconds after Plate J and shows a fairly uniform diffusion throughout the entire room. Plate L was taken three minutes and fifteen seconds after Plate K and shows very little change.

As shown by these pictures, the diffusion was almost immediate and within a minute after the ignition of the bombs the cloud covered the entire room. While the body could detect no appreciable air movement, the smoke cloud was in constant motion, whirls being seen in all corners and even in the cloak space. Of course under such conditions, stratification was impossible.

The foregoing data proves very conclusively that the high-velocity jet from the unit machine gives much better diffusion than the lower velocity with either the split or plenum

system. This jet acts on the air in the room very largely as a stream of water thru the nozzle of a garden hose acts upon a barrel of water, as opposed to the same quantity of water from the hose without the nozzle. In the first case, all the water in the barrel is agitated while in the latter, local currents are set up. While the air agitation is complete, there is not enough air movement to set up any objectionable currents.

All of the above findings are based upon performance in individual rooms, but there is another side to the question of equal importance. It is possible to theoretically design a central fan blast system so that all rooms get a like quantity of air, but the writer has yet to meet with such a system in actual practice. In the

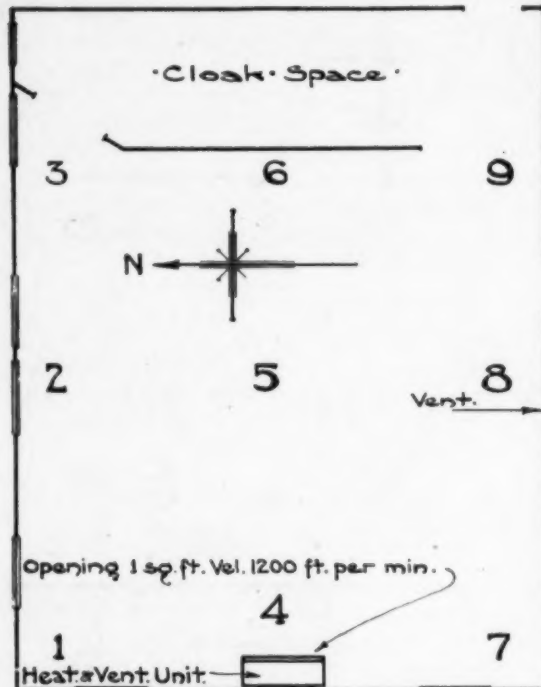


Plate 3

Temperature Readings.

| Station. | 6 in. From Floor | 5 Ft. From Floor | 9 Ft. From Floor | Greatest Temperature Difference. |
|----------|------------------|------------------|------------------|----------------------------------|
| 1 | 69 | 72 | 73 | 4 |
| 2 | 69 | 73 | 72 | 3 |
| 3 | 69 | 73 | 73 | 4 |
| 4 | 71 | 72 | 73 | 2 |
| 5 | 70 | 71 | 72 | 2 |
| 6 | 70 | 72 | 72 | 2 |
| 7 | 71 | 71 | 72 | 1 |
| 8 | 71 | 71 | 71 | 0 |
| 9 | 69 | 70 | 71 | 2 |

FIG. 3.

best of systems there are certain rooms that the custodian of the plant will tell you are "slower to heat" than others. In other words, they are not getting their full quota of air. In the best of construction, windows and doors will leak at times and if there is a strong wind blowing, the balance of the system is upset.

It is this difficulty in the plenum system that has led up to the split system. Any one will immediately notice lack of heat, but lack of ventilation is not so readily detected. Therefore put in direct radiation and the faults of your plant are more or less successfully camouflaged.

In the unit system, each machine is giving its particular room a full quota of air, regardless of exterior conditions. After the speed of the fan is once adjusted, the question of air delivery to that room is settled.



PLATE K.

In the grade schools of St. Joseph, the primary rooms are dismissed an hour earlier than the higher ones and the heat in those rooms can be discontinued with a resulting saving in power and steam. The old central fan system in the Jackson school had a $7\frac{1}{2}$ h. p. motor that had to be operated at full speed as long as a single classroom was used. Under the unit system, there are eight motors using about two and one-half amperes each at seventy volts, and any or all may be discontinued at will. The power saving is self-evident.

It was rather difficult to determine the exact comparison of operating costs as all of these plants had had partial shut-downs on account of coal shortage. In both the Bliss and Washington schools the fans are driven by steam engines at a comparatively small expense as the exhaust steam is used for heating purposes. In the Jackson school the power is purchased from the local lighting company and this acts against the plant in the showing of costs. In a larger installation it would be possible to install a steam driven generating unit. Another factor that should be taken into consideration is that the air leakage in the Jackson school is much greater than in either of the other two, owing to the physical condition of the building.

As near as can be determined, the cost per cubic foot for heating and ventilating these buildings so far this season are: Bliss school, \$0.001005; Washington school, \$0.00125; Jackson school, \$0.00113. The net result of all the above investigations and tests is that in the opinion of the writer the unit system has proved so satisfactory that he has decided to recommend its use in a larger school where the present plant must be replaced.

Albany, N. Y. Governor Smith of New York has signed the Lockwood-Donahue bill providing for a temporary increase in salaries for teachers in New York City. This measure raises about \$20,550,000 for this purpose thru a direct state tax of one and a half mills, and increases the minimum salary of New York City teachers from \$900 to \$1,500. New York City's share will be \$600 per teacher and there are about 23,840 teachers.



PLATE J.



PLATE L.

MY DEAR LESTER

Conflicts and Contradictions in School Administration

A. BOYD

May 22nd.

My Dear Lester:

So you have been rather busy during the closing months of school with endless details and with much additional correspondence. I believe you are right. Most every teacher I know has filed his application with an agency, and some with three or four. Many you say have referred to you. I suppose tho you have little room to object in filling out these blanks. While in the bank here the other day, Halpin asked what you were trying to do, as he had filled out three papers in regard to you recently.

While in the city a few days ago I met our old friend Gage, and he told me that you are succeeding fairly well and that you would be retained with perhaps an increase in salary. The biggest single objection, he tells me, is that you go down to White's and visit Doris more times than most of the parents think necessary for the head of the school. It is not necessary apparently for you to look for another position. It might be well for you to stay where you are another year and make a first-class reputation which will probably bear you dividends.

So there are many petty things that annoy you? You say you have tried about every method you have ever heard of or could think out and you have been unable to interest some of your boys, even some of the girls, in study. You feel, do you, they have not the respect for public property they should have when they will deliberately destroy playground equipment they helped you to build a few weeks before? Now I fear you have forgotten your youth. Because of our blood relation, I remember you distinctly, and I want to say that sometimes I felt you were degenerating considerably from the older stock. You may see faults in your boys and girls but, my boy, you had about the worst case of love I ever saw. Why you will remember that the big track coach, Deggender, wrote me a note—he feared to come to see me about you—that he could not take you to the track meet at the university unless “you could stay away from skirts long enough to throw the discs and heave the shot a dozen or more times each day.” These young people of yours, I should judge, are about normal. As the term draws to a close you are getting tired.

Yes, I received your postal about winning the consolidation election and then a few days later I read in the Times it had been illegal—that you did not have enough notices of the election and to save all the doubt and annoyance later, the board called a new election. It disturbed me to hear that you received most of the blame for this error. I am amused at what White said about this election and that he takes a rather good natured shot at you when you are down there. So he knew of this error all the time in the coming election but because you would not come to him, he would tell you nothing. It is well for you to keep this fact in mind. More people than you think will help you if you just give them the chance.

I am glad to know, however, that since you did make this mistake you were able to carry the second election. You need not be surprised at anything that may happen in a close election. You know in anger horrid thoughts flash across the mind. The speech that old man Crowell made that night at the Independence school-house is characteristic perhaps of what the opposition was thinking. “This upstart of a teacher or professor or whatever he thinks he is, a stranger in our town, who has never paid

a cent of taxes and quite likely never will, has more influence in this community than a half-dozen of the heaviest taxpayers. He has all our children so worked up that there is no peace at home or anywhere else. I had to slap my oldest girl, Minnie, this morning for talking back to me about this thing. One can't go to the telephone, meet one of them on the road or anywhere else without the kid goes after you about this here election. It looks like we might as well turn this here country over to the kids and the school teachers and the rest of us pay the bills. No wonder we have so many of them Bolsheviks everywhere when this condition exists here in a civilized community. I for one am for kicking this young professor clear out of the community.”

Now then, my boy, this speech is the best recommendation you could possibly have as a schoolman. I have copied it from your letter so you may frame it. These To-whom-it-may-concern letters are not in the same class at all. You should have risen in your seat and have continued bowing for some time. In one of your letters some time ago you were complaining about the lack of power, that the law hardly recognized you at all. Now take this case for example,—you have unbounded power. If you are really a schoolman no one in the community can compare with you in influence. You can fill a picture show or make a deficit for the owner. You can raise or lower school taxes at your will. You can place your high school graduates or send them on to college. But you must not use this power, if you wish to retain it, selfishly or merely to get even.

Your consolidation election to secure more money to run your schools and the incidents connected with it reminds me of a bond election I was interested in a few years ago. We had a crowded condition, an old building all were ashamed of, a district out of debt, and the people were progressive enough to build. As I looked over the field it seemed that the time had come to start the propaganda for a new building. There was a meeting of the principals, and ways and means were discussed and plans were outlined. So all fall and winter the needs of the school were set forth in school notes in the local papers, in school essays, in entertainments, in conversations and in other ways. Principals and teachers made speeches before women's clubs, and each of the male teachers joined the Commercial Club, tho the cost of membership was a little greater than some felt they could afford.

But one blunder was committed that very nearly cost us the election. There were two ward schools—north and south—and there had been for years a traditional bitterness between them. Even one of the board members at a meeting one night told of a big fight the two wards had had when he was in the eighth grade.

At the time of the election, a couple of young men were principals, and they were so full of “pep” that I laid awake nights thinking out suggestions to keep them busy. The various tests and measurements were then being used for the first time to our knowledge, so we secured these and we tested the youngsters in about all the ways devised. We had a series of basketball contests, spelling contests and ciphering contests. We might have known better than to match these ward schools—stirring up internal friction—but it seemed none of us had foresight. These young men worked out a set of rules governing these contests with all the details freshmen plan a banquet. The first two or

three contests passed off smoothly, good crowds, each side about equal in the number of contests won and lost. Then one night at a ciphering contest between the grammar grades trouble started. A local pastor was presiding. The best cipherer on the south side was called to the board. Each of the pupils finished in practically the same voice, but the minister decided in favor of the south side girl, doubtless because her side had been getting a little the worst of it, and she then proceeded to beat every north sider left—and she won. Of course there was murmuring, and I think some of the parents and a teacher or two said something to encourage it. The next was a spelling match, and the south siders won again. Then came a basketball game and the south won by a close margin. On the way home that evening several of the grammar room girls had an argument that ended in a fight and the north side girls, judging from the way their faces were scratched up, had lost again. Now young Capheart, north principal, in an unthinking sentence, spoken perhaps to console the children, told them, “They may win these contests but we'll get the new high school building.”

Of course the children told their opponents on the first opportunity and before we were aware the whole town was in an argument about the location of the new building.

To make matters worse, the north side was much the larger in population and of course had the voting power, but the ward school—the upstairs was used as a high school,—was located on one block of ground while the south side had five acres sloping southward always dry for play and experimental purpose. Then there was a small denominational college in the north part of town, clinging to life like a slow pupil to a final examination paper. A number of influential citizens were in favor of increasing the high school tuition so as to force non-residents into the college and thus put it on its feet again and save themselves from being “taxed to death” as they put it. If this was done, they argued, there was little need for the new school.

Some weeks before these last contests, the high school pupils had circulated a petition to vote the bonds for a new school building and about three-fourths of the voters of the district had signed it. The board a few days after the girls had had their fight, called an election to take place in about three weeks.

Now here were the conditions: A \$70,000 bond issue, a school with strong internal factions, a north and south fight for its location, many on the north side voting against the bonds to help the college, and the proposition must carry by a two-thirds vote.

The real estate men who had been passively interested up to this time now carried on long whispered conversations with old authorities on town affairs. It seemed too that most of them owned property on the south side. The new state highway, too, passed right by the south grounds. The local papers were neutral. Few business men on account of the factions wanted to take a stand. The town was districted, subdivided, and a complete poll taken and the results showed about 25 more than the necessary two-thirds. The freshmen placarded the town. They wrote a postal to every voter. Two junior boys were ordered out of McHenry's harness shop on account of their attitude for the school. The high school was strongly united but those grade children could not forget—all of them. One little eighth grader said, “Papa's going to vote against the bonds just to keep the north

siders from getting the new building." A local pastor found his Sunday school attendance reduced nearly 50 per cent because he would not state how he stood on the bond issue. There were heated arguments on the streets. Men quit dealing in a business way with each other. I learned no end of uncomplimentary things about my neighbors—double dealers, those you could depend upon, those who were false.

Then the day of election came. A foot of mud and snow lay on the ground. The high school boys had half a dozen cars on the square by 7:30 to bring in the voters. Their principal and teachers had them worked up to a fighting pitch. Good looking high school girls handed circulars to voter after voter on the way to the polls. Early that morning John Taylor, tall, lean and determined, round whom the opposition centered, was standing in front of Price's clothing store with a crowd of loafers when with his arm raised like the Goddess of Liberty, a cigar between his fingers, "I tell you these bonds will not pass, they will not pass. Majority will rule."

That evening as the crowd gathered near the same spot to hear the results of the election, Joe Foster who had heard Taylor that morning took the same position in Taylor's presence and, "I tell you the bonds have passed, they have passed. The majority has ruled."

I was amused at what you had to write about that "starter," I believe you called her, in your parent-teacher association, the one who during the winter made a motion that the school take up a collection each week—a potato, one week, a nickel the next, a can of fruit the next, and so on, for the poor and also the one who made the motion that the teachers and pupils backed by the association put on a "clean up" day for the town. So she had something outlined for you to do the last month—that the boys make, print and put up the names of the various streets in the town, at present hanging vertically on one nail in many places. So you were compelled to take a stand on account of the rebellious attitude of your teachers. Your speech on this occasion certainly pleased Gage, as he told me about it at that meeting in the city. He said you complimented Mrs. Newlan very highly upon her progressive ideas, that she had done much for the town and the school, that you felt sure she stood for civic progress in every way but the school would have to decline to act on this occasion, that the teachers had decided upon some drives of your own, namely to reduce the per cent of misspelled words per pupil, to reduce the per cent of inaccuracies in arithmetic, to start a movement in penmanship in certain grades that the Bs and Fs could be distinguished, that the school was \$200 in debt for some stereopticon sets purchased earlier in the year and that this must be met by an entertainment at the close of the year. Gage said you mentioned other things which he could not recall.

So after a year's work—the best you can do—you find there are weak spots in the school system. Now I was of the opinion that a young man of your ability would have all the defects worked out of a school the size of yours by the end of the first year, but in your letter before me you tabulate weakness after weakness. From the trend of the answers you received I should judge you asked for information which the course of study does not outline. So your little freshman girl with some reputation as a dancer thought the word France was a name applied to a section of this country like Dixie or Yankee and she was not sure whether Kentucky was in Chicago or Chicago in Kentucky.

And you received a variety of highly interesting answers from the various tests you gave in the grades. One lad wrote in answer to your query why America was not named after Colum-

bus—"Because America's best puchis came over and when Columbus went back people said call it America." And another wrote that ivory soap is made from elephants and another that the "patriotic juice" works upon the food in the intestines and one that "dry docks" were a kind of physician in the U. S. since prohibition went into effect.

Of course I shall not say anything about these weaknesses in your school. Such information as you say, might affect those who do not know schools. I am glad tho to know you are writing a new course of study by which most of these errors may be eliminated. When it is finished be so kind as to mail me a copy.

So you think our teaching appeals too much to sentiment—that we are developing feelers rather than thinkers and you are revising your course of study so more attention will be given to thought and the formation of judgment. It is quite possible that you can make improvement in this field, but I would no more think of taking out the feeling in training the child than to take out the sense of taste in eating. It may be we have overworked the feeling phase. Re-reading your letter about this matter, reminds me of an extemporaneous speaking contest I attended a few weeks ago. Tho the high school lads had a list of twenty subjects to select from six of the seven, each unknown to the other, spoke on Bolshevism. Each too effervesced with a mighty desire to save "humanity and democracy" but each was as innocent of reasoning as a sixth grader of Caesar.

The teachers as you indicate may also be affected. You find their hearts are all right but you can not rely on their monthly reports for accuracy. So at Mr. Prewett's suggestion (by the way, I am glad you are getting along so well with this board member) you made a talk to your teachers some time ago on "literary accuracy," I believe you said he termed it. In his opinion teachers have more facts to deal with than any one else and for that reason make so many errors. So his children frequently quote

things learned from their instructor, such as Longfellow wrote "A Perfect Day," the Webster-Lincoln debate, and Edison invented the aeroplane.

While writing you this letter, yours of the 20th came telling of your reelection with a 33 per cent increase in salary and that you had decided to remain. *Congratulations.*

I shall be more than pleased to tell your aunt when she returns this afternoon. But, my boy, do not let this little triumph lie too prominently in your memory. These are peculiar times. I was talking with a board member some time ago at a place where I used to teach, and he asked me if I knew where they could secure a superintendent. The one they had, he said, was "no good" but he was as good as could be secured, perhaps, for the money they had to pay.

It was all made clear to you, was it, by that present of the board, janitors and teachers? So you were able to bear up well enough at the time when the committee of teachers and board members made their short presentation speech, but many tears came later when you were alone as you thought of the mean things you had spoken to teachers and board members or as you remembered mean things said about the community. I believe your resolution to curb your tongue is an excellent one.

And White sold forty acres of his land at \$50 an acre more than had ever been paid for land in that section to a neighbor so he could move his house across the road and be in this consolidated district. It may be this is one reason why White did not oppose you so vigorously.

I am glad you will continue working on your master's degree this summer and that Doris will also attend but at her suggestion not at the same institution. So some time, may be next year you will visit us—on your honeymoon trip. But here comes your aunt and we must talk of this news.

Let me hear from you as usual.

Your uncle,

Ben Tivis.

Democratization of School Administration

Supt. Frank V. Thompson, Boston, Mass.

Various people interpret the idea of democracy differently. To some it is the absence of any restraint, a condition where one may do as he pleases. Others consider democracy a condition where the things he desires done are done. Still others interpret democracy as a condition where the majority possess all rights and the minority none. I prefer the idea of democracy attributed to Pasteur—democracy is a condition where the individual possesses the greatest freedom to render service to others. Democracy in this sense is service rather than self, freedom to serve rather than to enjoy,—others first, myself last. Democracy in school administration in the sense used by Pasteur means that the teacher shall be free to render her best service to the child. It does not mean a condition where no instructions come from those of higher rank, where one may work or not as he chooses, where one's feelings toward propositions govern assent. The teacher serving the child, however, ought to enjoy the utmost freedom in the use of her powers in the instruction of the child.

In a democracy all serve in one degree or another. The teacher serves in the highest rank. Teaching is the highest social service. One might outline three rough groups of services in which are found the workers upon whom society depends. One group produces the goods we use,—clothing, buildings, food. One group operates public utilities, water, light, transportation. A third group are assigned ministrations

of public health, public safety, and public instruction. This group under modern conditions has been looked upon as most essential to the public welfare. The normal and continuous functioning of this group is necessary for the life of the people. Therefore those who serve in this group are regarded, consequently, as possessing a peculiar and important relation towards society. The public demands that this group entertain no allegiance in conflict with the public weal. The public servant recognizes no self-interest.

The teacher belongs in this group and in its highest rank. Democratization then means the opportunity to serve the public by serving the child. It is fair to say that the teacher welcomes the advent of greater democracy in education for no other than the purpose of rendering larger service,—in giving better instruction, in being freer to do the things which she thinks will benefit the field.

It has been said that education has been automatically administered in the past. This means merely that the decisions of what should be done for the child have originated in the minds of those of higher rank and handed down to the teacher who must carry out the instructions. We may assume that the former autocrat had the welfare of the child keenly in mind in formulating the instructions. His motives were not to coerce teachers but to benefit the children. To my mind democracy in education

(Concluded on Page 117)



Standardization of School Accounts and School Statistics

Henry R. M. Cook, Auditor, Board of Education
New York City, N. Y.



There has been accorded to me the privilege of addressing you on the subject of the original object for which this organization was created—the standardization of school accounts and statistics.

Seven years ago, at the convention in Philadelphia, this association adopted a constitution, section 2 of which reads as follows: "Its object shall be the standardization of fiscal, physical and educational data of school systems for presentation in the form of public reports, and the promotion of efficiency in school accounting, school statistics and school administration."

At the same meeting, a committee on standardization, consisting of Mr. Keough of Boston, Mr. Mason of St. Louis and myself, presented a report and argument in favor of standardization, which report met your approval, as signified by its unanimous adoption.

Since that time, it has become obvious that the seed sown by this association has borne fruit. Annual reports prepared by boards of education in many parts of the country, reflect the principles set forth in our 1913 report. Institutions of higher education have recognized the merit of what we set on foot, and their various departments of school administration, accounting and statistics have accepted our contribution in aid of better educational management, and exemplify it in their curricula and lectures.

It is pleasant, therefore, to realize that we have justified our existence in this respect, and that "standardization" has become an established fact, tho not yet altogether universally availed of.

I think it was Lord Kelvin who once remarked that the value of science lies in its practical application. At least we can identify with ease many changes which have occurred in the school world in this respect since the promulgation of our report on the subject of standardization, so that our exposition of scientific principles has apparently measured up to Lord Kelvin's wise remark, and has proven some degree of value by its adoption and practical application. In other words, we have progressed.

All that was stated on this subject seven years ago is true today, because principles are permanent, altho methods may change.

It is not my intention to inflict upon you a dissertation on ordinary school board book-keeping methods, because we are all fairly well-informed thereon, but rather to advocate the more extended use of the standardized formula already adopted by this association, and to advance reasons therefor.

The late war has been followed by strong reaction in favor of extended and more concentrated forms of education; preparedness in peaceful pursuits; in vocational training; in physical training; in the study of trade and

commerce; continuation work in connection with business industries; community and social center work; visualized instruction; and lastly, in that part which education plays in the transformation of the illiterate foreign-born thru the crucible of refinement into a well-informed and loyal citizen, familiar with our institutions and traditions and worthy to be assimilated by the body politic—Americanization.

Standardization is a form of preparedness.

Educational processes are prone to be inexact from the standpoints of finance and business. The diverse activities in which the public schools are now engaged render it difficult to establish degrees of relationship as to the value of results obtained educationally or socially, and large sums may be expended without obtaining commensurate results, unless a degree of watchfulness and care is maintained which will check or restrain extravagances born of an overzealous desire to excel or to experiment; and carried along on a wave of good feeling and prosperity. The actual background of some projects may not be as substantial and lasting as our optimists may believe.

It does not follow logically that the present aggressive campaign in educational extension is correct in all its parts. The plane may, and doubtless will be raised by the efforts made, but whether the higher degree of civilization sought to be attained will be realized in a maximum sense remains to be seen. The difference between maximum plans and the actual practical results secured may be represented by a large expenditure of money on experimentation resulting in failures, and it would seem the part of wisdom for us to compare notes, whenever possible, so as to minimize unnecessary expense.

Does it not seem reasonable, that as we progress towards a point of equilibrium in the process of readjustment, deflation and shrinkage in material affairs will also have their effect upon educational expenditures? Unless we can discern the wheat and the chaff; the good and the bad; the necessary and the unnecessary; the useful and the useless, we may fail in an important phase of our official existence and in the performance of natural duties and functions.

Do you not agree with me that at no time has the need been more apparent than now of comparing our experiences in the administration of educational affairs? Yet how can we run the yardstick across them and obtain a measurement unless we employ standardized methods of accounting and statistics?

While the value of educational results cannot be gauged entirely by sordid figures of cost, nevertheless the "worth-whileness," so to speak, of most things is coupled closely in the public mind, and, indeed, in some administrative minds, with the cost to produce.

This is a method of measurement from which educational bodies cannot escape, for while the public may not be able to value results scientific-

ally or accurately, any phase of education stands or falls in the light of public opinion, and public opinion is largely influenced by the financial cost.

Standardization of school accounts and statistics has already accelerated the desire to inquire into what our contemporaries are doing. The school community is no longer surrounded by a Chinese wall of self-sufficiency. It is found to be profitable and advantageous to study the operation of activities in kindred systems—to refrain from establishing what another has already found useless, and to reproduce in the same or better form that which our neighbor has painstakingly originated.

Education is broad and unpatentable, and in the interests of our communities we are justified in securing, by legitimate means, the inventions, discoveries and experience of other school systems. Conversely, it is our duty to make known our successes and our failures for the benefit of others.

It should not be considered in the light of disgrace or cause for humiliation, to have to report that an activity or an experiment, started in good faith, has proven unsuccessful or that its mediocrity in results does not justify its continuance. In using the word "activity," it is not intended to apply it as representing purely educational functions and operations. It is intended to cover any and all of the operations of a school system, educational, physical, financial and administrative. The ramifications and workings of salary schemes or plans for compensation of the teaching staff; the methods employed to compensate the janitorial force and the adjustment of their remuneration so as to accord with the various functions required to be performed, and the labor problem inherent in any such scheme, are both financial and administrative matters.

Every school board is more or less confronted with the task of solving these important things. The methods, plans, experience and conditions; past, present and anticipated costs of these, and all other problems in school administration, are of vital and common interest. How can we successfully solve these problems unless we confer or correspond in the same language and terms?

Standardization of accounts, of statistics, and especially of terminology, will enable school systems to establish relationship on a common basis, and to talk in the same language upon the same matters. The helpfulness and value of exchange of recorded experiences of cost, both in unit form as well as in volume, and the related kinds, grades and volumes of service represented thereby, is unquestionable.

While it must be conceded that conditions vary in separate localities, nevertheless there are sufficient numbers of school systems operating upon a similar basis and of corresponding size, to make it worth while, at any time, to inter-

change experience in relation to any question of moment which may arise.

Since we commenced to agitate the advantages and merit of standardization, there has been a marked tendency upon the part of the various state managements to agree upon uniform lines of reporting. Reference to the United States reports indicate that many states have fallen into line, altho there still are some which have to be converted. It is to those educational authorities who have not yet recognized the benefits which accrue by adoption of standardized forms of accounting, statistics and terminology, that we should appeal.

We should try to overcome the prejudice which undoubtedly exists in many quarters against anything that savors of a change from the methods of long ago; from methods which do not fit the times; from methods which have become superannuated; from methods which do not produce the best results.

Lack of confidence in progressive accounting; fear that modification means revolution; veneration for antiquity, and a resolve not to be led into worshipping at the shrine of unknown gods, are factors to be explained away and contrasted with better things.

Standardization in accounting and statistics does not mean upheaval or chaos. Rather does it mean the reverse. It need not disturb the equanimity of the individual, nor make his labors more arduous. However, it may conflict with some cherished theories, and faulty principles and practices, but the shock is not necessarily fatal.

Standardization in accounting and statistics does not mean the reduction to a single system of all accounting and statistical methods, irrespective of the nature of the activity to which it may be applied. It is not necessarily what has been termed "uniform" accounting.

If we were to advocate the adoption of a single system thruout the country, we would at once conflict with hundreds, nay thousands, of school systems, which are dependent upon local laws, local authorities, local systems of taxation and local methods of raising and administering school funds.

From theoretical and scientific standpoints, standardization means the use of natural methods, and follows natural lines in harmony with the particular educational or physical function or activity to be controlled and governed, so as to bring together related facts.

For instance, in every school system, irrespective of size, there are certain features which stand out unmistakably. If we purchase a site or erect a building, and equip it with permanent fixtures and apparatus, it represents an investment of the capital of the community; it is a permanent thing intended to last for a generation or more. Frequently—in fact, generally—it is represented in a financial sense by a bond issue, another name for deferred taxation, the credit of the community being pledged meantime.

If we were running a factory, we would call this "Plant," and it would be regarded as a capital asset, its cost to be written down for "depreciation" as occasion required. As a matter of fact, from our standpoint it is a piece of plant—educational plant—so to speak. However, to us it represents something different in nature from its factory prototype. It represents to us the cost of "housing" and "seating" the child.

The intrinsic value of such a plant is problematical. It represents in the aggregate the expenditure of a large sum of public money. Unlike its factory prototype, it brings in no dividend in a business sense.

For our purposes, we can only regard its "cost" as indicative of its "value" to us, but its market value cannot even be conjectured. Therefore, "cost" does not represent "value,"—they are not interchangeable terms in educational administration.

This "plant" must be maintained in a reasonable condition of repair. Theoretically the annual expenditure for such purpose may be considered as equivalent to making good "depreciation" in the factory sense, altho it cannot provide against "obsolescence."

We have, therefore, arrived at the necessity of establishing an account for a fiscal period called "Maintenance of Plant," and in this standardized division or classification of our school funds, we can group just as many or as few funds or accounts as we may choose to create, so long as we know that they are part and parcel of "Maintenance of Plant."

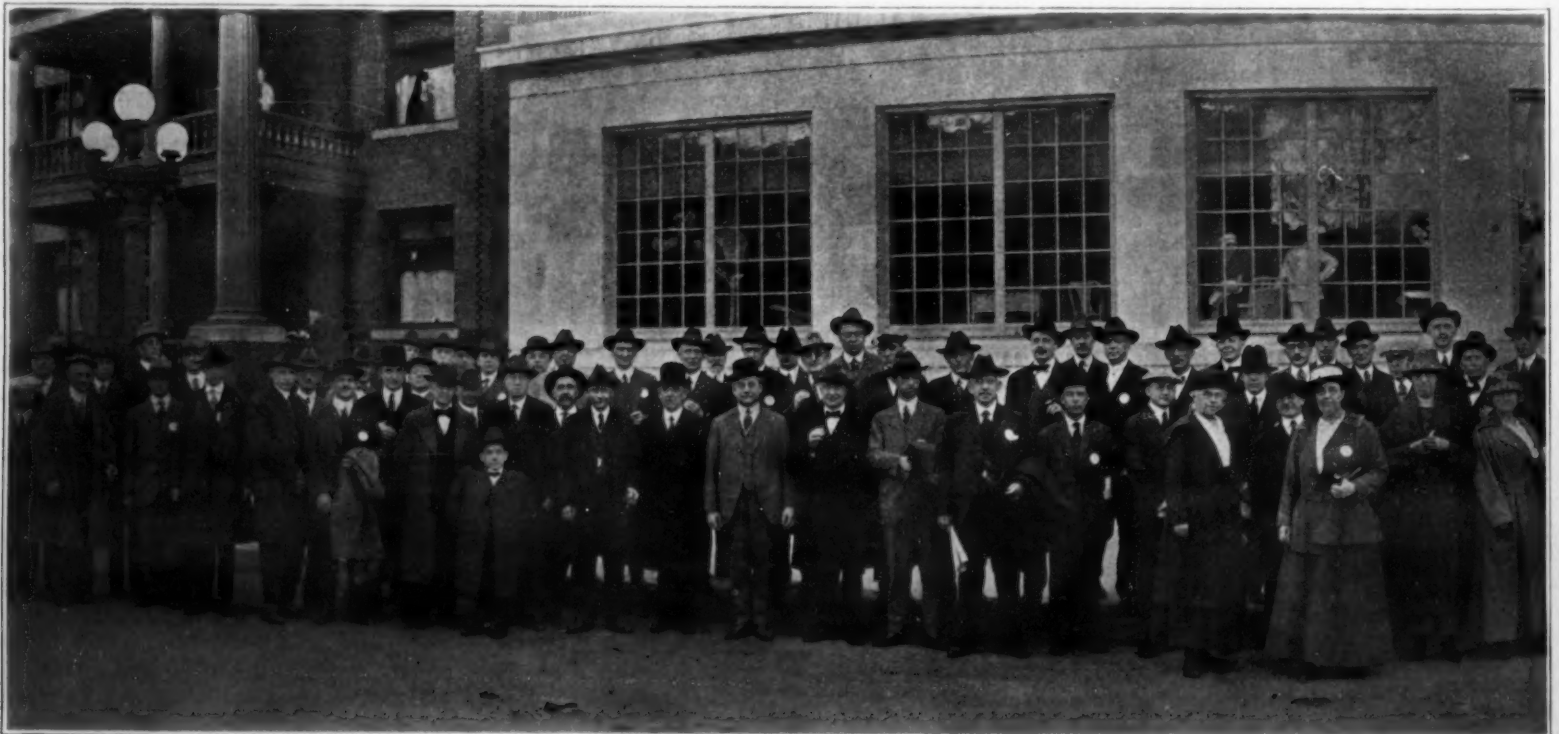
Therefore, if we agree on this simple terminology and treatment of the accounts relating to upkeep of plant when we are in correspondence or conference with each other, we shall be talking in the same language about the same thing and there can be no mistaking what we mean.

If the statement were made by the school board of "X" that it possessed a school plant (excluding land) which cost \$1,000,000, and that "Maintenance of Plant" was represented by 2½ per cent of such capital cost, then we would be able to make a comparison with our own problem. We would have a basis upon which to inquire as to why it was costing us say 3½ per cent of capital cost. If our neighbor's plant were in as good a state of upkeep as our own, would it not be worth while to ascertain the reason for our greater expense?

So right here, we can say to the school officials who reject or overlook the benefits of "standardization," that the acceptance and practice of the principles we advocate would not do violence to their books, accounts and statistics, altho it might, in spots, dislocate cherished traditions. But it would emphasize that agreement of all to record in like manner, the things which are natural and common to the standardized classification called "Maintenance of Plant," and might furnish a clue or a reason for the stoppage of a leak or the regulation of an abuse.

"Operation of Plant" may be defined as the function of conducting the physical working of a school plant for the purpose of carrying out the object for which it was created. It is a concomitant of the property investment. Its cost may bear some ratio and some relationship to the volume of the uses of the plant, and to the number of activities conducted therein. Similar arguments to those in the case of "Maintenance of Plant" might be advanced. It is unnecessary to dwell further upon that particular.

"Administration" is of two kinds, that which pertains to physical control, and that which pertains to educational or professional control. I have seen attempts to prorate and to assign such expenses to "unit" costs of activities, but I am of the opinion that such a proceeding is entirely arbitrary, and is, at best, only an approximation of fact. Rather is it better for such items to stand alone for the purpose of annual comparison, than to submerge them piecemeal in unit costs. Thus, we might lose sight of the cost of an important item of school administration, practically the cost of steering the educational ship. Nevertheless, in the desire to dispose of such items, attempts have been made to prorate them, for the probable reason that "out of sight" would mean "out of mind."



GROUP OF MEMBERS OF THE NATIONAL ASSOCIATION OF SCHOOL

It is not a mere aphorism to say that education is the fundamental object of all school systems; it is a principle that should always be borne in mind, and never disregarded when school boards become adjunctory to politics and politicians. There is something more contained in the public school system than the mere making of appointments, the giving out of contracts, and subservience to the will of those "higher up."

Another principle of fundamental importance should be ever before us—the school unit is the child. Given, therefore, a pupil to receive knowledge and a teacher to impart it, and we have the genesis of the school.

Books and material form the first important aids or related adjuncts, but instruction can be both received and imparted with the existence of only the two first factors. Plant, maintenance of plant, operation of plant, etc., etc., merely indicate the expenses of material facilities which the community is willing to contribute in order to facilitate the educational process. This brings us to the point which we can enunciate and establish a principle in the standardization of "educational cost."

Fundamentally the cost of instruction plus the cost of such supplies and books as are used in connection with the processes of instruction represents "educational cost" pure and simple. If we all accept this principle in its simplicity, we will have decided one of the principal points in the structure of standardized school accounts and statistics. It is not difficult to comprehend; it is not hard to accept.

Have you not seen cost reports prepared on the lines of total expenditures of school moneys divided by some factor such as "enrollment" or "membership" or "register" or "average attendance," the mathematical product being intended to describe or furnish a "unit of cost"? How many variables and combinations of variables may be contained in such a formula, and yet there are plenty of reports produced along such lines or similar lines? Of what use is such a computation to the community whose school cost it is supposed to represent? Of what use is it to other communities who may seek comparisons in educational affairs?

From my viewpoint, the combining of school expenditures of heterogeneous nature with the object of trying to produce a unit of school "cost" is in the nature of a comedy in mathematics, if it were not almost a tragedy in administrative reporting. The service factor or

divisor is important. If you examine school statistics generally, you will find the service factor is very much of a variable.

If the school authorities desire to make an exceptional showing to the community, whereby low cost and economy are apparently demonstrated, they may use as a factor "membership," "register," "enrollment," etc., etc. The greater the inflation of figures, the less the cost,—that is—apparently.

If the method be questioned, the excuse (not reason) is generally advanced that provision had to be made for all the school population—registered, enrolled or whose names appear on the school rosters of membership—and it is not the fault of the school authorities if the pupils do not attend, the place being prepared for them.

The answer is simple; our problem is to measure actual school service rendered, and to show the cost of that service. Actual school service is represented by computing the aggregate days of attendance of each and every pupil for a given period,—for instance, the time covered by the fiscal period. It may be divided by the number of school days within the period, and thus produce the factor of "average daily attendance." It may be reduced to an hourly basis as a method of refinement, and in such form is of considerable value in establishing "cost" relationship between educational activities in cases where the duration of sessions is variable.

I think I have probably shown enough to indicate that expenditures flow thru certain natural broad channels, no matter whether the school system be large or small.

To sum up—these channels represent definite divisions in the educational structure. Each division requires separate treatment from accounting and statistical standpoints, if any advantages are to be gained in administration. Some of these divisions of expenditure may be reduced to a basis of "unit" cost. Other divisions may not be reduced to a basis of "unit" cost, their volume alone being comparable periodically. Segregation versus intermingling is the keynote.

As to basic terminology, let us name these divisions as follows:

1. Instruction.
2. Educational Materials and Supplies.
3. Plant.
4. Maintenance of Plant.
5. Operation of Plant.
6. Allied Activities.
7. Administration.

Of course, I am not touching upon such purely financial matters as interest on bonded indebtedness and so forth, in cases where school authorities have the power to bond and to tax the community; I am talking about those matters which we have in common.

Items 1 and 2 (Instruction and Educational Materials and Supplies) may be taken both separately and in combination, for the purposes of exhibiting "unit" cost. Item 3 (Plant)—represents the cost of seating the pupil, not necessarily the cost of seating the actual pupil of today, but the seating cost applied in connection with the use of the number of pupils seated as a measure of capacity. This is comparable with other buildings in the same school system, and also with buildings in other school systems. Items 4 and 5 (Maintenance of Plant and Operation of Plant)—are divisions representing volume expenditures. The pupil unit cannot be applied as a measure.

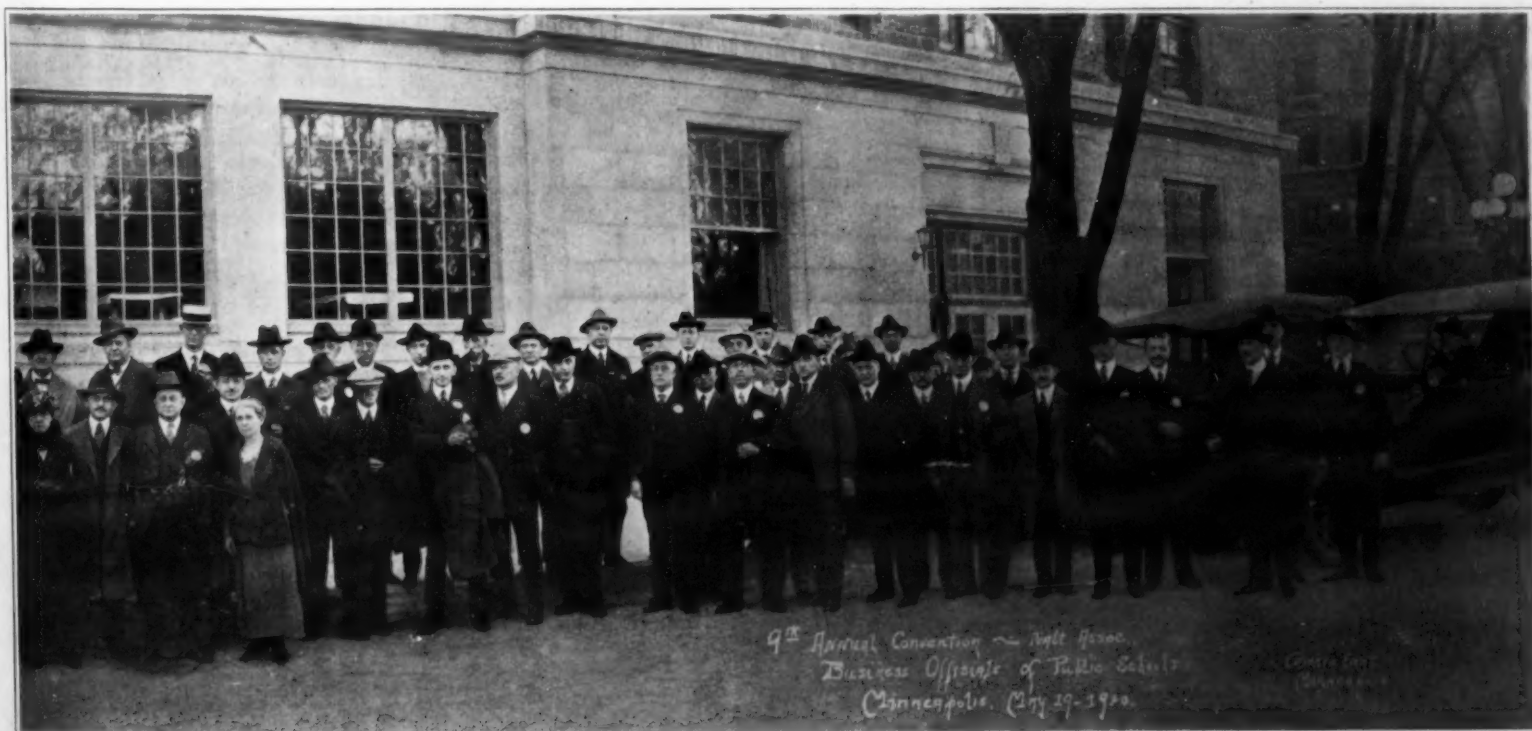
Item 4 represents upkeep of a piece of plant or real estate, and is regulated as much by natural elements of decadence and obsolescence and accidents and misuse and inefficiency as it is by the ordinary and proper use of the plant for its appropriate purposes.

Item 5 is the volume cost of putting the plant in motion, so to speak. It takes very nearly as much fuel to heat a building in which there are vacant seats as the building in use to its full capacity. The cost of lighting a classroom with 50 pupils in it is just the same as if there were only twenty pupils. A building requires cleaning whether in use or not in use, altho perhaps not in the same degree. A piece of plant requires to be watched and cared for whether wholly or only partially in use or not in use at all. In other words, minimum and maximum costs of use of any piece of school plant are not so very far apart, but sufficiently far apart to preclude the use of a "unit" system of cost based upon pupil attendance.

Further, the modern school building is now used for so many different purposes at both different and concurrent periods in the day, that to prorate operating expense would be to try to traverse the realms of speculation. My personal experience indicates to me, at least, the impossibility of doing other than to treat this division in similar fashion to "maintenance."

Item No. 6 (Allied Activities)—represents

(Concluded on Page 115)



ACCOUNTING AND BUSINESS OFFICIALS AT MINNEAPOLIS, MAY, 19, 1920.

School Employes and the Workmen's Compensation Act

When the workmen's compensation idea was accepted by the American people it found expression in the enactment of laws in the various states of the Union. It contemplated compensation for those who were injured in the course of and as a result of their employment.

The exact line drawn between the inclusion and exclusion of employes has varied considerably. Some states have framed their laws to include the more hazardous industrial occupations only while others have adhered to a broader interpretation of the compensation principle.

In the light of these varied conceptions and interpretations it may be of some interest to present the operation of the several state compensation laws in their relation to school employes. An inquiry addressed to the various state superintendents of public instruction has resulted in the following responses:

A Record of States.

Alabama: The Workmen's Compensation Act does not apply to school employes of any county, city, town, village, or school district, provided, however, that any county, city, town, village, or school district may accept the provisions of the act by filing written notice thereof with the probate judge.—Spright Dowell, State Superintendent of Public Instruction.

Arizona: School employes do not come under the Workmen's Compensation Act in this state.—C. O. Case, State Superintendent of Public Instruction.

Arkansas: School employes do not come under the Workmen's Compensation Act in this state.—J. L. Bond, State Superintendent of Public Instruction.

California: All school employes come under the Workmen's Compensation Act.—Job Wood, Jr., Deputy Superintendent of Public Instruction.

Colorado: School employes come under the Workmen's Compensation Act of this state.—Mary C. C. Bradford, State Superintendent of Public Instruction.

Connecticut: School employes come under the Workmen's Compensation Act of this state.—N. Searle Light, Director of Supervision.

Delaware: According to the Delaware Workmen's Compensation Law of 1917, the following exemptions are made: "This article shall not apply to farm laborers, domestic servants, officers and servants of the state, or any governmental agency created by it, nor to their respective employers, nor to the employers, nor employes in any employment in which less than five persons are employed." It would appear from this that school employes do not come under the compensation law.—A. R. Spaid, Commissioner of Education.

Florida: We do not have a Workmen's Compensation Act in this state.—W. N. Sheats, State Superintendent of Public Instruction.

Georgia: School employes do not come under the Workmen's Compensation Act in this state.—M. L. Brittain, State Superintendent of Schools.

Idaho: School employes come under the Workmen's Compensation Act in this state.—R. F. Martin, Assistant Superintendent of Public Instruction.

Indiana: The Workmen's Compensation Act of this state covers school employes.—L. N. Hines, State Superintendent of Public Instruction.

Iowa: School employes come under the Workmen's Compensation Act of this state.—P. E. McClenahan, Superintendent of Public Instruction.

Kentucky: Teachers in our public schools are not under the Workmen's Compensation

Act.—George Colvin, State Superintendent of Public Instruction.

Louisiana: The Workmen's Compensation Act applies to the employes of school boards but their right to compensation depends on whether or not the occupation is hazardous as defined by the act.—L. E. Hall, Assistant Attorney General.

Maine: The Workmen's Compensation Act applies to teachers if they wish to take advantage of it.—Augustus Thomas, State Superintendent of Public Schools.

Maryland: The Workmen's Compensation Act of this state covers only extra hazardous employments, and consequently school employes, as such, would not be generally covered. There is a provision, however, of our act which provides that one engaged in an extra hazardous employment is entitled to compensation. Each case depends upon the facts and circumstances in connection therewith. It is possible, therefore, that school employes might under peculiar circumstances be covered by the act. The Industrial Accident Commission has decided that one engaged in doing ordinary janitor service at a school building is not covered.—W. P. Wachter, Secretary Industrial Accident Commission.

Massachusetts: It is held by court that a school janitor does not come within the meaning of the law if his work consists in superintending others and the work done by others, but that if a school janitor actually performs with his own hands the work of a laborer, workman or mechanic, he comes within the meaning of the act. It is also held that an instructor employed by a city in an industrial and vocational school whose duty it is to instruct boys in mechanics, English, arithmetic, and civics, and who, where it is possible, instructs them in all kinds of motor vehicle repairing and at times gives a practical demonstration himself as to how the work is done, is not a laborer, workman or mechanic within the meaning of the statute.—Robert I. Bramhall.

Michigan: The Workmen's Compensation Act applies to school employes in this state.—Fred S. Johnson, Secretary, Industrial Accident Board.

Minnesota: School employes come under the Workmen's Compensation Act in this state.—P. C. Tonning, Deputy Commissioner of Education.

Mississippi: Public school teachers do not come under the Workmen's Compensation Act.—J. W. Broom, Assistant State Superintendent of Education.

Montana: School employes come under the Workmen's Compensation Act in this state.—May Trumper, Superintendent of Public Instruction.

Nebraska: School employes in this state come under the Workmen's Compensation Act.—I. N. Clark, Inspector, Department of Public Instruction.

Nevada: School employes come under the Workmen's Compensation Act.—W. J. Hunting, Superintendent of Public Instruction.

New Hampshire: School employes do not come under the Workmen's Compensation Act in this state.—Harriet L. Huntress, Deputy Commissioner, State Board of Education.

New Jersey: The Workmen's Compensation Act of this state applies to all employes of boards of education who receive a salary of \$1,200 or less, but no person receiving a greater salary or holding an elective office is entitled to compensation.—John Enright, Assistant Commissioner of Education.

New Mexico: School employes do not come under the Workmen's Compensation Act of this state.—Jonathan H. Wagner, State Superintendent of Schools.

New York: Persons employed by school trustees or boards of education in this state whose duties come within the hazardous employments enumerated in the Workmen's Compensation Act come within the provisions of such act. Thus, janitors, carpenters and other laborers are possibly covered by this law. My opinion is that members of the supervising and teaching staffs employed by trustees and boards of education do not come within the provisions of this act.—Irwin Esmond, Assistant Counsel, State Department of Education.

North Carolina: We do not have a Workmen's Compensation Act in this state.—W. H. Pittman, Chief Clerk, Department of Public Instruction.

North Dakota: All school employes of this state come under the Workmen's Compensation Act.—Minnie J. Nielson, State Superintendent of Public Instruction.

Ohio: The board of education in this state carries insurance with this department and the employes are compensated covering injuries occurring during the course of or arising out of employment.—H. C. Baker, Industrial Commission.

Oklahoma: The Workmen's Compensation Act of this state does not apply to teachers.—R. H. Wilson, Superintendent of Public Instruction.

Oregon: Men and women working about a school building, such as janitors, plumbers, carpenters, etc., may come under the Workmen's Compensation Act in this state, provided the school board makes application to come under the act. Many school boards make application.—J. A. Churchill, Superintendent of Public Instruction.

Pennsylvania: Teachers and other employes are entitled to recognition under the Workmen's Compensation Act but it does not cover the superintendents.—George Becht, First Deputy State Superintendent.

Rhode Island: The Workmen's Compensation Act in this state applies only to employes who elect to become subject to its protection. So far no school committee has elected to become subject to the act.—Walter E. Ranger, Commissioner of Education.

South Carolina: There is no Workmen's Compensation law in existence in this state.—J. E. Swearingen, State Superintendent of Education.

South Dakota: The Workmen's Compensation Act of this state applies to school employes.—Fred L. Shaw, Superintendent of Public Instruction.

Texas: School employes do not come under the Workmen's Compensation Act of this state.—Annie Webb Blanton, State Superintendent.

Utah: The Workmen's Compensation Law applies to school employes of this state.—E. J. Norton, Assistant Superintendent of Public Instruction.

Vermont: In this state school employes do not come under the Workmen's Compensation Act.—Edmund P. Hamilton, Executive Clerk, State Board.

Virginia: Teachers and other school employes in this state come under the provisions of the Workmen's Compensation Act.—Harris Hart, Superintendent of Public Instruction.

Washington: Teachers in manual training departments where any kind of power-driven machinery is used are within the express provisions of extra hazardous employments as defined by the Workmen's Compensation Law of this state.—Josephine Corliss Preston, Superintendent.

(Continued on Page 117)

HIGH SCHOOL COSTS IN IOWA CITIES

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The purpose of this investigation was to get some relative data regarding high school costs in Iowa cities. Cities chosen for their representative size and similarity in methods of instruction, number of students enrolled, and number of teachers employed. The following cities were chosen: Council Bluffs, Davenport, Waterloo, East Waterloo, Ft. Dodge, Dubuque and Muscatine.

A sufficient number of questionnaires—(Form 1), was sent to the principals of each of the above high schools with the instruction to fill out one blank for each teacher employed in that school. When the questionnaires were returned the data contained in them was tabulated in the order of Form 2. (See following pages.)

Form 1. Questionnaire.

NOTE TO PRINCIPAL: Will you please fill out one of these blanks for every teacher in the high school:

Name of teacher.....
Salary per month.....
Salary per year.....

Daily program of the teacher:

| Period. | No. | Subject. | Class. | Enrollment | Days of |
|---------|------|----------|--------|------------|----------|
| | | | | Nov. 1st. | meeting. |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |

Does this teacher have special duties, such as coaching an athletic team, a dramatic play, or running the school paper? If so please specify what these duties are, and about how much time per week it takes.

If for any reason this teacher teaches less than the regular number of periods a week please specify the reason for this.

Form 2. Tabulation of Data.

| Teacher. | Subject. | Class periods per day. | No. of min. in each. | Annual salary of Teacher. | Enrollment in class. | Salary per day. | Cost per student—hour of 60 min. | Cost of Supervs. per 60 min. hr. |
|----------|-----------------------|------------------------|----------------------|---------------------------|----------------------|-----------------|----------------------------------|----------------------------------|
| A. | Latin | 5 | 45 | \$ 950 | 78 | \$4.75 | \$0.066 | |
| | Supervision | 1 | 45 | | | | | \$1.06 |
| B. | History | 5 | 45 | 1,050 | 86 | 5.25 | .05 | |
| | Supervision, etc..... | 1 | 45 | | | | | 1.16 |

The above tabulation was continued until all the teachers in each school were listed under their own school. From this tabulation the tables of this study were compiled. In one case it was necessary to secure the required data from other sources than the questionnaire. This item was the high school enrollment. It was taken from the Iowa Educational Directory for the year of 1917-18.

Table I.

| Name of city. | Total cost of instruction. | Total number of pupils. | Cost per pupil per year. |
|--------------------|----------------------------|-------------------------|--------------------------|
| Council Bluffs.... | \$33,180.00 | 801 | \$41.42 |
| Davenport | 50,850.00 | 964 | 52.75 |
| Waterloo | 19,607.00 | 364 | 55.88 |
| East Waterloo.... | 19,890.00 | 461 | 43.14 |
| Ft. Dodge | 34,222.00 | 489 | 70.00 |
| Dubuque | 27,100.00 | 561 | 48.30 |
| Muscatine | 16,570.00 | 342 | 48.45 |

Table one should be read as follows: The total cost of instruction in the Council Bluffs high school is \$33,180.00; the total number of

pupils enrolled is 801; the average cost of instruction for each pupil per year is \$41.42. To secure the items in the last column, divide the total cost of instruction in each city by the total number of pupils enrolled in that high school. By comparing the items in this table we find the total cost of instruction ranging from \$19,890.00 to as high as \$50,850. The total number of pupils range from 342 to 964. The cost per pupil is the only comparable data in the table. This ranges from \$41.42 in Council Bluffs to \$70 in Ft. Dodge. The cities in the order of the per pupil cost of instruction are as follows: Council Bluffs is the lowest, then East Waterloo, Dubuque, Muscatine, Davenport, Waterloo and Ft. Dodge in the order of their increase in costs per pupil.

\$62 per thousand student-hours for instruction in English, \$74 per thousand student-hours for instruction in history, etc., thru the entire table. To find the per thousand student-hours cost, the teacher's salary was first estimated. From this the salary for one hour of the time, that the teacher was on duty, was derived. This in turn was divided by the number of pupils in the class; the result was the cost per student-hour. By multiplying this result by 1,000 the cost per thousand student-hours is secured. If the class hour was less than sixty minutes, the student hour was raised to the value of a sixty-minute period in computing the cost. For example if the class hour was 45 minutes in length and the cost per student-hour of that length was 9 cents; then by dividing 9 by 45/60

Table II. Number of Students Taking Study.

| Name of City. | English. | History. | Science. | Mod. Lang. | Anc. Lang. | Man. Tr. | Dom. Sci. | Commerce. | Mathematics. |
|----------------------|----------|----------|----------|------------|------------|----------|-----------|-----------|--------------|
| Council Bluffs | 848 | 290 | 483 | 141 | 213 | 76 | 496 | 529 | 491 |
| Davenport | 874 | 345 | 602 | 168 | 114 | 162 | 247 | 634 | 550 |
| Waterloo | 478 | 129 | 276 | 124 | 170 | 334 | 98 | 0 | 263 |
| East Waterloo | 353 | 292 | 221 | 53 | 178 | 208 | 99 | 445 | 212 |
| Ft. Dodge | 413 | 175 | 215 | 48 | 163 | 117 | 237 | 282 | 172 |
| Dubuque | 422 | 175 | 231 | 34 | 188 | 162 | 130 | 341 | 316 |
| Muscatine | 330 | 142 | 296 | 105 | 136 | 95 | 80 | 186 | 282 |

Table II gives the number of students taking each study and should be read as follows: Council Bluffs has 848 pupils enrolled in the English department of their high school, 294 in history, 483 in science, etc. In some cases the number enrolled in one department exceeds the total enrollment in the high school. This is accounted for by the fact that one student may enroll for more than one class in any department. The normal training and agriculture received so little data from the question-

Table IV. Distribution of Costs.

| | English | History | Science | Mod. Lang. | Anc. Lang. | Man. Tr. | Dom. Sci. | Commerce | Mathematics |
|---------------|---------|---------|---------|------------|------------|----------|-----------|----------|-------------|
| 20-29 | 2 | 1 | | | | | 1 | | |
| 30-39 | 4 | 2 | | 1 | | | | 3 | 2 |
| 40-49 | 7 | 4 | 4 | 4 | 1 | 3 | 2 | 5 | 12 |
| 50-59 | 9 | 7 | 3 | 1 | 2 | 1 | 2 | 2 | 7 |
| 60-69 | 13 | 3 | 7 | 4 | 6 | | 1 | 4 | 6 |
| 70-79 | 5 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | 4 |
| 80-89 | | | 6 | 1 | 4 | 1 | 1 | 2 | 4 |
| 90-99 | 3 | | 2 | 1 | 2 | 4 | 2 | 1 | |
| 100-109 | 2 | 1 | | | | | 2 | | 2 |
| 110-119 | 1 | 1 | | | | | 1 | | 1 |
| 120-129 | | | | | | 1 | 1 | 2 | |
| 130-139 | | | | | | | | | 1 |
| 140-149 | | | | | | | | | |
| 150-159 | | 1 | | | | | 1 | | |
| 160-169 | 1 | | | | | | | | |
| 170-179 | | | | | | | | | |
| 180-189 | | | | | | | 1 | | |
| Totals | 47 | 22 | 26 | 15 | 18 | 15 | 16 | 23 | 38 |

or $\frac{2}{3}$ the value for a student-hour of 60 minutes was obtained, the result being 12 cents. This was necessary to secure comparable data as

Table III. Cost Per Thousand Student-hours.

| Name of City. | English. | History. | Science. | Mod. Lang. | Anc. Lang. | Man. Tr. | Dom. Sci. | Commerce. | Mathematics. |
|----------------------|----------|----------|----------|------------|------------|----------|-----------|-----------|--------------|
| Council Bluffs | 62 | 74 | 78 | 58 | 119 | 108 | 75 | 83 | 65 |
| Davenport | 76 | 57 | 72 | 89 | 55 | 130 | 90 | 73 | 68 |
| Waterloo | 59 | 37 | 58 | 42 | 75 | 55 | 60 | 0 | 56 |
| East Waterloo | 57 | 89 | 75 | 0 | 69 | 75 | 131 | 51 | 62 |
| Ft. Dodge | 65 | 58 | 90 | 60 | 71 | 109 | 98 | 0 | 73 |
| Dubuque | 50 | 36 | 73 | 55 | 65 | 81 | 128 | 45 | 57 |
| Muscatine | 37 | 53 | 57 | 49 | 73 | 0 | 57 | 55 | 47 |

In Table III we find the cost per thousand student-hours given for each of the studies found in Table II. This table should be read as follows: It costs the city of Council Bluffs

the class period of these seven schools ranged in length from 40 minutes to 60 minutes.

If one wishes to make a more complete study by comparing similar studies of cost, they may

Author's Note.—I wish to express my thanks to Dean W. F. Russell of the Iowa State University for his help in securing the data from which this study was made.

secure further data from the study made by Lewis and Wilcox on the instructional costs in the high schools of Des Moines, or in the one made by Russell and Wilcox on the instructional costs of the South Dakota high schools.

To arrive at a definite conclusion regarding the costs of each branch of study, it is necessary to work out a distribution table of costs. Then from this table the results tabulated in Table V were computed.

It would be well to note some of the differences in the cost per thousand student-hours in the different branches in the same school and also the same branches in different schools. We find that the individual cost ranges, in English, from between \$20-29 in one school to between \$160-169 in another school. In history from \$20-29 to \$150-159. In science we find the range to be from \$40-49 to \$110-119. In modern language the range is from \$30-39 to \$90-99. In ancient language the range is from \$40-49 to \$90-99. In manual training the range is from \$40-49 to \$180-189. The two cities listed as giving special normal training are closely related as to the matter of costs, the range being from \$65 in Council Bluffs to \$66 in Dubuque per thousand student-hours. In domestic science also we find a great range as to the matter of instructional costs, from \$20-29 in one instance to \$150-159 in another. On the average this has the highest per thousand student-hour cost of any of the branches listed. In agriculture there were but two cities listed, but they presented a wide range in instructional costs; the lowest being \$63 per thousand student-hours and the highest being \$160. In commerce there is a medium range compared to some of the other branches, the lowest is from \$30-39 to \$140-149. There is but one of the cities studied that, seemingly, pays any attention to the study of art, and that is Dubuque. This costs the city \$128 per thousand student-hours. In the study of mathematics there seems to be a more reasonable range, from \$30-39 in the case of the lowest to \$110-119 in the highest.

These variations and their causes present an excellent field for investigation by administrative officers. If instruction in domestic science,

able error of \$16.50. The median of the lower limit of ranges is \$35, while the median of the upper limit of ranges is \$145. This gives a range of \$110 between the medians of the extremes. This gives a median range of \$110 over which the costs of instruction of the several branches of study found in the curriculum of the foregoing secondary schools are distributed.

This is too wide a range. While some of the school may be paying an excessive price for certain studies, it is evident that some are paying so low a price that it does not bespeak for progress. And it goes without saying that such low prices paid for instruction in secondary schools, or any other schools for that matter, does not secure the most efficient teacher.

| Cities. | Ave. cost of supervision per 60 min. hr. | Total hrs. per day. | Cost of supervision per day. | Total cost of supervision. |
|----------------------|--|---------------------|------------------------------|----------------------------|
| Council Bluffs | \$1.20 | 10.5 | \$12.60 | \$2,266.00 |
| Davenport | 1.27 | 18 | 22.86 | 4,572.00 |
| Waterloo | .93 | 8.5 | 7.885 | 1,492.00 |
| East Waterloo | 1.21 | 14.5 | 15.44 | 1,033.60 |
| Ft. Dodge | 1.22 | 13 | 15.85 | 3,013.40 |
| Dubuque | .99 | 15 | 14.85 | 2,970.00 |
| Muscatine | .93 | 9 | 8.37 | 1,674.00 |

One of the important topics in any study of costs is that of supervision. The question of what proportion of the salary should be given for supervision comes to teachers, high school administrators and boards of education. To what extent does this particular work tax the mental or physical capacity of the teacher? Should the supervisor receive more pay for the supervision hour, or less? Inasmuch as the supervision work, in the schools listed in this study, was carried on by the teachers of the high schools, there has been no attempt to work out a formula in which the proper amount of a teacher's salary should be credited to supervision. The supervision listed in these seven schools consisted in overseeing the study room only. Therefore the average cost of supervision per hour was taken, in the various schools, and the results listed in Table VI.

Table VI needs, perhaps, a little explanation.

| | Eng. | Hist. | Sci. | Mod. Lang. | Anc. Lang. | Man. Tr. | Dom. Sci. | Com. | Math. |
|----------------------|--------|--------|--------|------------|------------|----------|-----------|--------|--------|
| Median | \$61 | \$57 | \$68 | \$65 | \$73 | \$92 | \$85 | \$65 | \$57 |
| Total Range..... | 20-169 | 27-175 | 45-105 | 35-95 | 45-95 | 45-185 | 25-154 | 35-145 | 35-115 |
| Quartile Range..... | 44-70 | 47-75 | 53-85 | 47-76 | 63-87 | 59-100 | 57-107 | 46-80 | 46-73 |
| Number of Cases..... | 47 | 23 | 26 | 15 | 19 | 15 | 17 | 23 | 38 |

for example, can be purchased for \$20 per thousand student-hours in one place in a particular state, it would seem that an adjustment would not only be justifiable but necessary in another place in the same state where the pupils are paying as high as \$154 for the same unit of instruction. Supposing, for the sake of argument, that it is worth the median cost, \$85, (see Table V); then add 25 per cent for increase in salary since the data for this study was collected; there is still a difference of \$49 between this salary and the highest paid salary in the cities listed. The question confronting the administrator on one hand is this: What condition makes it necessary to pay the enormous price indicated by the maximum; and on the other hand, why should any teacher attempt to do the work for one-twelfth of the amount paid to another teacher for the same kind of work and the same number of hours?

In Table V the median of the medians is \$65 per unit of one thousand student-hours. The median of the lower quartiles is \$47, while the median of the upper quartiles is \$80. This gives a median quartile range of \$33, or a prob-

tion. The total hours of supervision per day is obtained by adding together the number of hours each teacher spends in supervision in one particular day. Thus, one teacher may spend two hours, another three hours, and still another four; this would bring a total of nine hours of supervision for that school. This table is based on the teacher supervision and does not include the supervision of the superintendent.

The range of the cost of supervision per 60-minute hour is from \$0.93 in Waterloo and Muscatine to \$1.27 in Davenport. The total hours per day used for supervision work ranges from 4.5 in East Waterloo to 18 in Davenport.

| City. | Total No. of students. | Total No. of teachers. | Average No. of students per teacher. |
|---------------------|------------------------|------------------------|--------------------------------------|
| Council Bluffs..... | 801 | 32 | 25 |
| Davenport | 964 | 44 | 22 |
| Waterloo | 364 | 22 | 17 |
| East Waterloo..... | 461 | 20 | 23 |
| Ft. Dodge..... | 489 | 29 | 16 |
| Dubuque | 561 | 25 | 22 |
| Muscatine | 342 | 19 | 18 |

Table VI is also a study for school administrators. Why have the program so arranged as to cost \$22 per day when by a different arrangement the cost might be greatly reduced and the efficiency of the school remain the same?

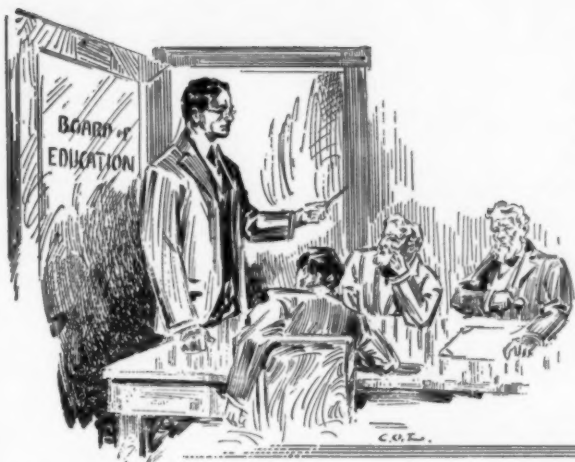
Table VII shows the average number of students per teacher in each of the seven schools. This will act as a check on the cost per student-hour as found in Table III. For example: If the cost per student-hour or per thousand student-hours was running extremely high in any one of the systems of schools listed, one might arrive at the conclusion that, possibly, the number of students per class was extremely low. Then by turning to Table VII could note the number of students per class. Or if the cost per thousand student-hours was extremely low, then one might reach the conclusion that the

number of students per class in that school was extremely high. By using this table one could temper all conclusions.

This table shows a very commendable fact, viz: That the number of pupils per teacher is very reasonable. The number is within a very limited range. This then shows that the wide variations found in the costs per thousand student-hours for instruction is exactly as Table IV and V would indicate.

It is not necessary in a study of this kind to tire the reader with a list of long drawn conclusions. It is intended that this study should indicate a standard of procedure that would bring to any board of education or high school administrator some facts and figures that might prove beneficial in ascertaining the status of their school system. We have no right to congratulate ourselves upon the fact that we are paying less than others for instructional work, unless we can prove that we are buying the same quality of work. In all probability the highest paid teacher in all the seven schools listed is worth the money paid as salary; but it is hardly probable that the lowest paid one is a progressive, wide awake, energetic teacher, giving to her pupils the educational bread of life in the best manner possible.

Beloit, Wis. The board has adopted a salary schedule for teachers which will take into account the professional preparation of instructors, successful teaching experience and after training in service. The salaries are to be paid in ten monthly installments and cover a school year of nine and one-half months. The schedule provides for the following: Teachers holding normal school diplomas will begin at \$1,000 and advance at the rate of \$50 to the maximum of \$1,350. Teachers with university credits begin at \$1,100 and advance at the rate of \$50 to a maximum of \$1,450. Teachers holding college degrees begin at \$1,200 and advance at the rate of \$50 to a maximum of \$1,550. Teachers who earn university credits begin at \$1,300 and advance \$50 until the maximum of \$1,650 is reached. It is provided that exceptionally strong and successful teachers may be given double increases upon the recommendation of the principal, supervisor and superintendent. Successful and progressive teachers will be advanced in salary, and unsuccessful teachers will not be retained longer than the two trial years. Teachers who attend special summer terms in college or university will be paid \$50 additional provided they earn at least two major credits each year.



The Convention of School Business Officials

The Ninth Annual Meeting of the National Association of Accounting and Business Officials of American Schools

That the war and the reconstruction period have heaped upon the business departments of city schools dozens of difficult problems which are not shared by the educational officers of the school was made clear at the ninth annual convention of the National Association of School Accounting and Business Officials. That these problems have been generally and satisfactorily solved so that the schools have been able to continue their work at full efficiency was also made clear to the credit of the ability, foresight and self-sacrifice of the great majority of school board secretaries and other school business officials.

Practically no teachers, and comparatively few teachers, have any appreciation of the services which are rendered to the schools by the business department in the school board office. Not until a superintendent himself digs into the work done by the secretary and the accounting officer and the purchasing agent of the schools, does he appreciate that these several positions involve a knowledge of several sciences and of practical affairs that are quite as broad and complicated, and in many respects far more exact than are the pedagogical and psychological sciences which underlie teaching. When a superintendent makes a mistake in accepting an educational theory or a teaching method, the results are not readily visible and the school board is rarely able to check up in the lives of the pupils, while they are in the schools, or after they have left the schools. But when a school board secretary overbuys or pays too high a price, the results show very clearly in the stock room and in the school board's financial reports. So, too, a building mistake is a constant and very material reproach to the man who made it.

The ninth annual convention of the National Association of School Accounting and Business Officials gave very clear evidence that the business of American schools is in the hands of men who thoroly understand the importance of their work and who are literally "up on their toes" to meet every emergency and to make every dollar of school tax money available for teaching service. They have a very keen understanding of their position in the school system and of their relations to the educational department. They have in addition, a sense of business values and a thoro understanding of community situations, and when they clash with the educational authorities, it is simply because they have added to the superintendent's spending sense their own business intuition and experience, and their sense of purchasing values.

The convention at Minneapolis devoted itself to the problems of building construction, accounting, the management of janitorial service, budget making and finances, and the handling of textbooks and supplies. A surprising variety of topics came to the surface in the question box and a voluminous amount of information was made available to those who heard the discussions and papers.

The First Session.

Mr. Henry B. Rose, secretary of the school board of Providence, R. I., called the convention to order and presided most acceptably over its sessions. The first set paper of the meeting was an address on "The Handling of Textbooks," by Mr. Samuel Gaiser, superintendent of schools

for the board of education of Newark, N. J. Mr. Gaiser brought out especially the need of care in selecting books on a strictly educational basis and the subsequent handling of stocks of books in a thoro business like manner. He argued against carelessness in permitting quantities of obsolete or wornout books to accumulate in the school basements.

The general discussion which followed, brought out the desirability of school board representation in the purchase of new books and in the making of contracts for them. The board of education is the official representative of the community and it cannot delegate the final disposition of such problems as the selection of books to the educational authorities. Further discussion took up the relative value of the open system of textbook selection as compared with the adoption of single texts and state adoptions, inventories of schoolbooks, etc. It was brought out that it is desirable that the business department of the schools keep inventories of the book stocks which are in the several school buildings so as to prevent the accumulation of stocks which are no longer useful, the ordering of excessive quantities of new books, and the loss or destruction of books.

A serious complaint was voiced by numerous speakers that the books produced during the last year or two, have been decidedly inferior in the quality of the paper and binding supplied by the publisher. It was brought out that the rebound books last several times as long as new books. A number of the large cities of the country maintain their own book binderies for handling wornout books, and a number of smaller communities make contracts with local binderies for rebinding service. In St. Louis, the average cost of rebinding school books is 14 cents. In Worcester, Mass., the city contracts with a local bindery for handling its books and the average cost is 22 cents per volume.

It was urged that publishers ought to be notified that the cloth, binders' twine, super and paper at present in use are insufficient in strength and quality and that improvements are urgently needed.

Building Problems.

The second session of the convention was devoted entirely to a discussion of building programs and the standardization of schoolhouse planning and construction. Mr. Arthur Kinkade of Decatur, who opened the session, read a thoughtful paper on "The Elements of a Building Program for a Small City." He brought to the attention of the assembly the need for taking into account the financial situation of the city, the condition of existing school buildings, the geographical and residential problems of locating buildings, the growth and development of population and its relation to factory and commercial movements, etc. He spoke especially of the need for selling the building program when it has been once worked out, and the value of putting into it all the elements of enthusiasm and salesmanship of which the school officers and the board of education are capable.

In opening the discussion of the paper, Mr. J. J. Maher, member of the Schoolhouse Commission of Boston, described the situation in his city. It is the custom of the Boston commis-

sion to prepare its programs for a period of three years in advance and to consider numerous factors in deciding on the location and erection of new school buildings and the replacement and remodeling of old buildings. Mr. Maher showed the desirability of buying sites for buildings years in advance so as to beat the growing land values. He argued that at the present time, school boards should go very slow in razing old buildings. They should make use of such structures as are at all usable. He showed that at present the cost of building construction in Boston is 68 cents per cubic foot for new buildings and that the average cost of putting an old structure into good condition so that it will serve for many years, is 35 cents per cubic foot.

Mr. William B. Ittner of St. Louis, declared that the real problem in a building program is to sell it to the community. He described the Buffalo program which involves the expenditure of \$8,000,000 for twelve junior high school buildings and showed how the example of Buffalo is being followed in Niagara Falls where a program for \$3,000,000 is under way.

Mr. George F. Womrath of the Minneapolis schools, described the new type of sectional school buildings which are being erected in his city for the 15,000 children now in part-time classes. He laid down the principle that it is bad public policy to build monumental schoolhouses in this reconstruction period when the general tendency of costs in the next five years must be downward.

The second paper of the session was read by Mr. Frank Irving Cooper, chairman of the Committee on Standardization of Schoolhouse Construction of the National Education Association. Mr. Cooper outlined briefly the work of the committee, which during the past two years has been in the direction of determining what is a proper relation of space devoted to educational and to other purposes in a school building. Mr. Cooper declared that the examination of hundreds of the best buildings in the country show that the efficient schoolhouse devotes at least 50 per cent of all its area to strictly educational uses, while less than 50 per cent is devoted to walls, stairs and halls, heating and ventilation and similar purposes.

The next step in the work of the committee will be the formulation of a method for determining the sizes of school buildings in advance of drawing the plans. Mr. Cooper declared that this is readily possible if the educational demands of the school are known, and the minimum space allotment for each activity is determined.

Mr. Cooper's paper brought on the only clash of the convention. Mr. William B. Ittner of St. Louis objected to any tendency in the committee's work that would formalize schoolhouse planning or reduce it to rule. He argued that every school building involves a distinct problem and must be planned as an entirely new project. Every school is an entity which is different in some important elements from every other school, and no building can be planned to adequately meet any local situation unless it is specifically planned for it. Mr. Ittner objected sharply to any apparent endorsement by the committee of the one-story schools of Cleveland, in which credit is given for educational

space in the shape of play courts. He offered a resolution that the association disapprove of giving any building a rating for educational space unless this space functions as such. The resolution was seconded by Mr. Cooper and unanimously passed.

The program on Wednesday morning was opened by a paper on "The Standardization of School Accounts and School Statistics," by Mr. Henry R. M. Cook, auditor of the New York City board of education. Mr. Cook pointed out that accounting is a yard stick or measure of educational processes and expenditures, a means of separating the necessary from the unnecessary expenses, and a means of comparing one community with another. He argued for uniformity of nomenclature, for the adoption of a set of fundamental accounting principles, and for the standardization of those elements which are common and which can be generally applied. Mr. Cook's paper led to the adoption of a resolution rejuvenating the Committee on the Standardization of Accounting and Statistics and providing for its enlargement to the number of fifteen men and women representing respectively the large and small cities of the country.

Mr. John S. Mount, director of accounts for the New Jersey State Department of Public Instruction, in discussing Mr. Cook's paper, pointed out the difficulty of making accounting systems in the states uniform so that they will meet the needs of the big city and still be simple enough for the small community. He argued that every accounting system must be uniform in its general principles, must be broad, flexible, simple and easily maintained. He outlined the work which is being done in the state of New Jersey whereby every school system uses the same terminology and has forms based on the same elements.

The difficulties which may arise when various departments in a city administration are not a unit concerning the classification of school accounts, was made rather evident to the convention by some informal remarks of Mr. John S. Link, secretary of the Minneapolis Commission on Appropriations and Tax Levies. Mr. Link showed that the Minneapolis school board keeps its accounts according to the character of the expenditure, while the City Commission on Appropriations demands that its reports be based on the object of its expenditure. Mr. Wm. T. Keough of Boston, closed the discussion by calling attention to the fact that standardization of accounting is highly desirable for the purpose of obtaining data for making future appropriations, as well as for the purpose of giving an educational accounting.

The Management of Cafeterias was presented to the convention by Mr. R. H. Thomas, clerk and business manager of the Portland, Ore., board of education. Mr. Thomas, whose paper will be found on another page, argued that the school authorities should control the lunch-rooms, that they should be put on a self-sustaining basis, and that they should be used as a means not merely of furnishing healthful meals, but of improving the physical condition of the students. It was brought out in the discussion that the school cafeteria has not been standardized either as to its organization or management, but there is here a broad field for research and comparison to ascertain the most efficient organization and the most economical and effective type of administration.

The Fourth Session.

More than one-half of the session on Wednesday afternoon was devoted to Questions and Answers. It was astonishing to the members that the questions varied from problems on the purchase of ink and electric power, to methods of landscaping, insurance and teachers' salaries.

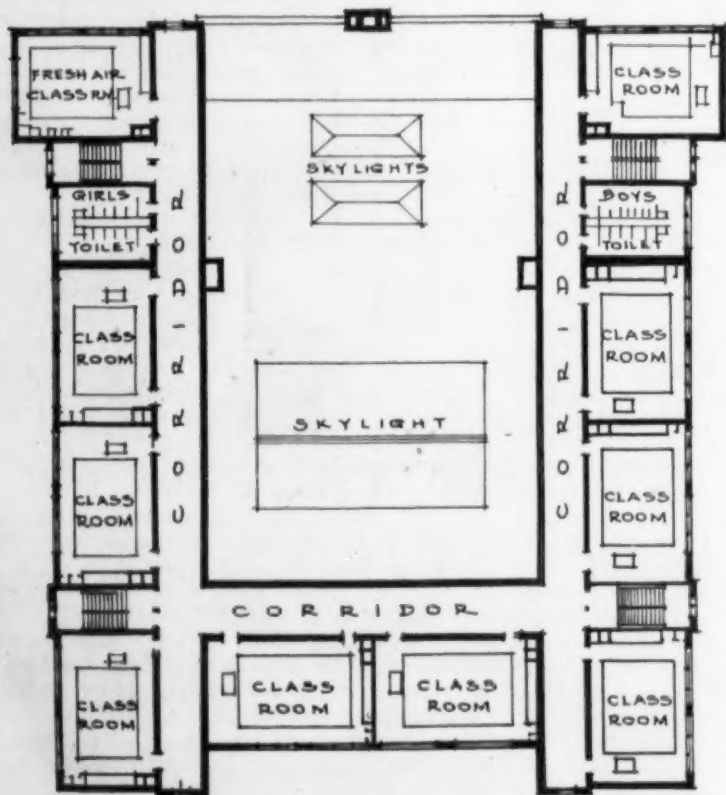
The paper of the afternoon was prepared by Mr. Kenneth G. Smith, who took up the problem of training courses for janitor-engineers. Mr. Smith outlined not only the character of courses which should be offered to janitors but also the method of organizing and conducting classes, etc. Quite as interesting and suggestive as the original paper was the discussion by Mr. O. S. Olsen, coordinator in trade instruction for the Minneapolis board of education. Mr. Olsen presented in a very simple way, the facts concerning the classes in janitor training as conducted in Minneapolis. He presented a complete outline of the courses of study and spoke of the interest and increased efficiency attained thru the courses. He showed that no course of instruction for janitor engineers can be conducted by any except experienced men who have a practical working knowledge of their subjects. Teachers in high schools are most efficient instructors in the practical laboratory demonstrations which are necessary to illustrate principles of physics and mechanics involved in the management of steam heating plants. Mr. Olsen declared that the most efficient plan of teaching janitors is by means of questions and answers. He stated, however, that under present conditions a well organized course leads to embarrassment on the part of the board of education, in that ordinary janitors are enabled thereby to pass the examinations for first-class stationary engineers and that their inclination is to take well-paying positions with industrial concerns.

The Final Session.

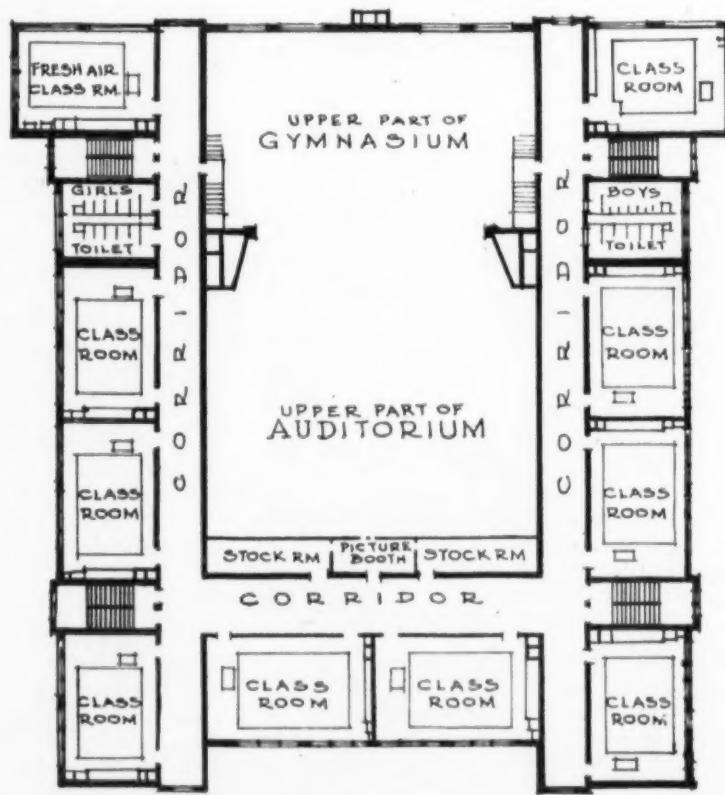
A Close-Up of School Accounts was given on Thursday morning by Mr. H. P. Cole, chief accountant of the Cleveland board of education. Mr. Cole discussed accounting from a rather idealistic standpoint and somewhat at variance with the very matter-of-fact attitude taken by school board secretaries and accountants. He made the point that boards of education must introduce adequate systems of accounting because it is necessary that they have on hand reliable and definite information relative to the comparative value of the educational product and as an indispensable aid in furnishing economical and equitable education. He urged that the value of the educational product should be measured and that the unit should recognize the elements of value as expressed in the pupils' time and in the school district's money. He argued that the educational product should be estimated by accounting and statistical processes combined with educational tests.

A most comprehensive statement of the legal, ethical and financial relations of the school board, the architect and the builder was presented by Mr. R. M. Milligan, commissioner of school buildings for the city of St. Louis. Mr. Milligan's paper, which showed considerable research, will be reproduced in the August issue of the SCHOOL BOARD JOURNAL. The discussion of Mr. Milligan's paper brought out a variety of ideas concerning the employment of architects and the relations of school boards to contractors. Mr. W. B. Ittner of St. Louis, argued that in his experience, boards of education who are doing annually a construction business of a million dollars or more, should employ an architect and a drafting force as a part of the administrative machinery. He declared that school boards who do less construction cannot employ an architect economically because there are inevitable periods when the architectural and drafting room force will be practically idle. Mr. J. D. Cassell of Philadelphia, declared that during the past twelve years the city of Philadelphia has employed its own architect, draftsmen and building superintendents at a total expense of approximately 2½ per cent of the total cost for the plans and supervision of the construction. A discussion of the relations of the school board to the contractors brought out the fact that there is the greatest variety of practice in the methods of paying the contractors and of bonding them. It was the consensus of opinion that the best plan for a contractor's bond is to write the contract in such a way that the bondsman or the bonding company is a party to the original contract.

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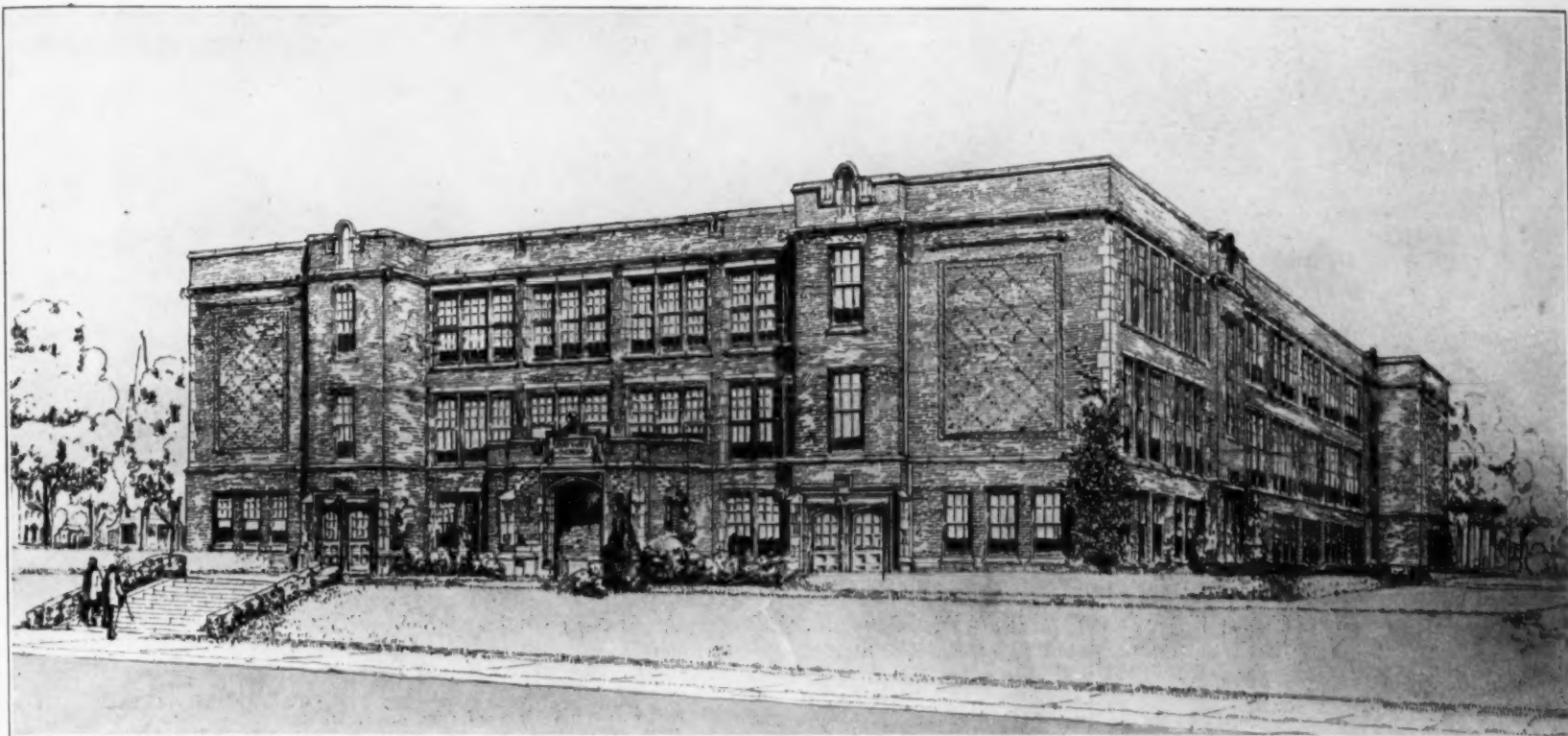


SECOND FLOOR PLAN.



FIRST FLOOR PLAN.

FLOOR PLANS OF THE BAYWAY SCHOOL, ELIZABETH, N. J.
C. G. Poggi, Architect, New York, N. Y.



BAYWAY SCHOOL, ELIZABETH, N. J.
Mr. C. Godfrey Poggi, Architect, New York, N. Y.

A CONVERTIBLE GRADE SCHOOL.

The new Bayway School No. 17 at Elizabeth, N. J., which is now in course of erection, introduces an interesting element in the planning of elementary schools in that it is so arranged that it may be converted into a junior high school.

The building, which was designed by Mr. C. Godfrey Poggi, architect, is now in course of erection for the contract price of \$471,426. The total appropriation, including the building, furnishings, walks, grading, and architect fees, is \$545,000. The sum does not include the cost of the land which previously was the property of the board of education.

The building is planned in the familiar block form with corridors and classrooms surrounding the gymnasium and auditorium units on three sides.

For use as a regular grade school the building has a pupil capacity of 1,600. The plan provides for twenty academic classrooms to accommodate 40 pupils each, two fresh air classrooms, a kindergarten room, two large rooms for domestic science, a manual training shop, a dental clinic, a room for the visiting nurse, a teachers' room, a principal's office, etc.

The ground floor which is on the level of the building site contains as its main feature the auditorium and the gymnasium. The former has a slanting floor and is arranged for the seating capacity of 500. The gymnasium is immediately back of the auditorium stage and is so arranged that its floor level is identical with that of the stage. The proscenium arch at the back of the stage is so large that when the curtains are completely raised a full view of the gymnasium can be obtained from the floor of the auditorium. It is planned to make the curtain between the stage and the gymnasium sound-proof so that both the auditorium and the gymnasium may be used independently at the same time. A velour curtain and hangings will be provided at the front of the stage.

The gymnasium may be fitted with 400 movable seats and the stage with 100. For mass meetings the assembly gymnasium will thus seat 1,000 persons.

The gymnasium, which measures 44'x64', will be fitted with standard apparatus. Immediately below it there will be shower baths and dressing rooms for each sex.

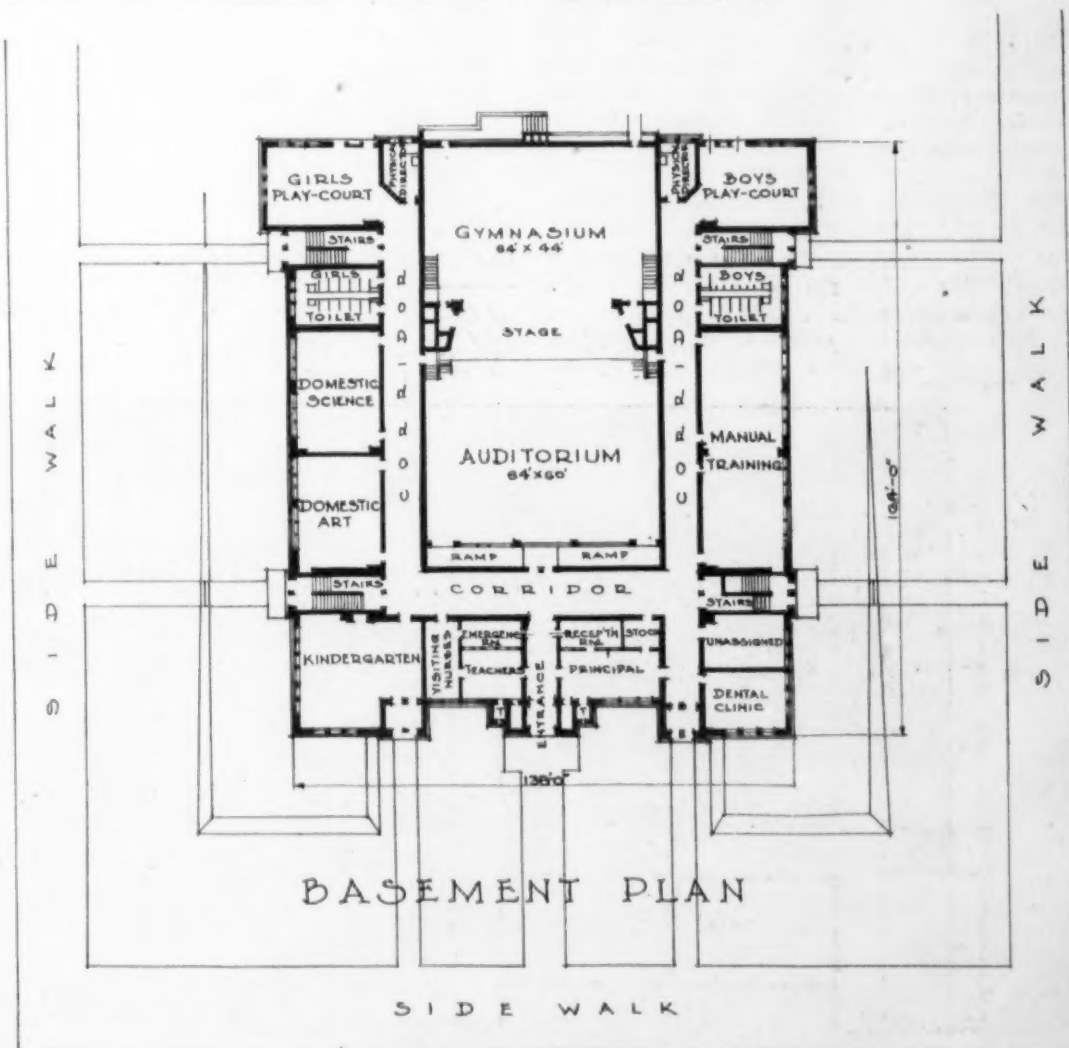
The building will be heated by means of two return tubular steam boilers, and ventilation will be provided by a unit system.

Considerable study has been given in the planning of the building to keep the cubic contents at a minimum. The basement has been eliminated altogether and only a small portion of the space under the gymnasium is below grade. This includes the showers and dressing rooms and the heating apparatus which of necessity must be below grade.

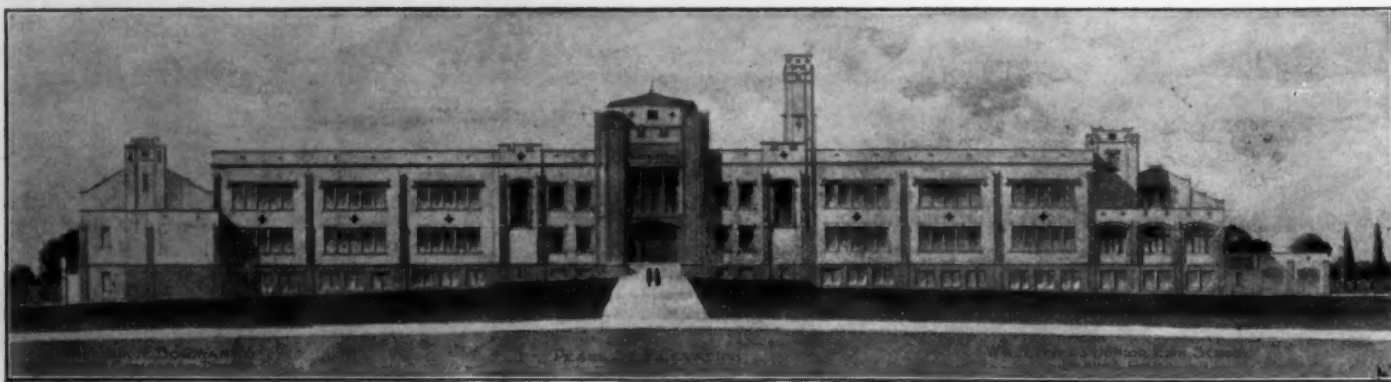
The exterior of the building has been simpli-

fied for the purpose of keeping down costs. The general style is collegiate. The materials are a light color texture brick and terra cotta. Considerable care has been given in the arrangement of the proportions and in the adjustment of the decorative material so as to produce the most pleasant effect with the funds available.

In Council Bluffs, Iowa, the landlords are charging teachers with higher room rentals because the latter are getting more pay. And now the question arises, who started this darned raising business anyway?



BAYWAY SCHOOL, ELIZABETH, N. J.
C. Godfrey Poggi, Architect, Elizabeth, N. J.



WM. N. BYERS HIGH SCHOOL, DENVER, COLO.
Wm. N. Bowman Co., Architects, Denver.

THE BYERS JUNIOR HIGH SCHOOL AT DENVER.

As the junior high school is becoming standardized in its organization, in the character of its course of study and in the limits of its work, architects are finding it possible to more nearly meet the needs of this new type of school. Some of the newest buildings, which are now under way, are models in economy and completeness of plan, and deserve study as well as commendation.

The new junior high school which is being erected on South Washington street, Denver, is an interesting type of the intermediate school building. It is located on a plot of ground consisting of an entire city block, in the center of a thickly populated district. It is expected that the building when it is completed, will be immediately filled with students from neighboring elementary schools, and with members of the freshman class of the West High school which is not at a great distance. The district is populated with middle class and well-to-do families who are eager to avail themselves of the opportunities of the school.

The site is considered one of the most beautiful in Denver. There are trees, vines and shrubs in great variety and of considerable local interest. To the north and east of the building the land slopes in a natural way to form a playground. The building is so arranged that the classrooms have east and west light, while the gymnasiums have north light exposure that will afford a maximum of cross currents of air for ventilation.

The building is gothic in design and the materials for the exterior are gray brick and terra cotta. The interior construction is steel and is entirely fireproof. The front corners of the building are relieved in rather a unique way. At the northwest corner, the drafting room juts to the front and is so arranged that it has

nearly north light. Above the drafting room on the first floor, there is an open-air classroom which is topped by a balcony. On the southwest corner, the corresponding space on the basement and first floor is occupied by the school kitchen and the science laboratory. These are arranged so that they receive light from two sides. This corner is also topped by a balcony.

The general form of the building is a huge letter "E," the projections from the stem of which are given to the gymnasium, the shop rooms and the auditorium. An eleven-foot corridor runs the entire length of the building from north to south.

The basement floor, which is practically above grade for the most part, includes the heating and ventilating apparatus, the shops and the other special departments. The entire north half is devoted to the manual training department which is divided into automobile, metal working, carpentry, painting, drawing and printing departments. The south half of the basement is taken by a room for typewriting, a classroom, a large room for bookkeeping and business practice, a school kitchen and a cafeteria and dining room. It will be noted

that the automobile shop is so arranged that cars can be driven directly into it, and the lunch room is so placed that food supplies for the kitchen can be directly delivered without interfering with the balance of the building.

On the first floor there are eight standard classrooms, an open air room, a science room and administrative offices. The boys' and girls' gymnasiums which are in the end wings have adjoining them locker and shower rooms and special rooms for the physical instructors. Each of the classrooms is 22 feet by 26 feet in size and is arranged for thirty students. Each is equipped with standard wardrobes, arranged along the inside wall of the room.

On the second floor there are twelve additional classrooms, a large library, retiring rooms for the teachers, emergency toilets, etc.

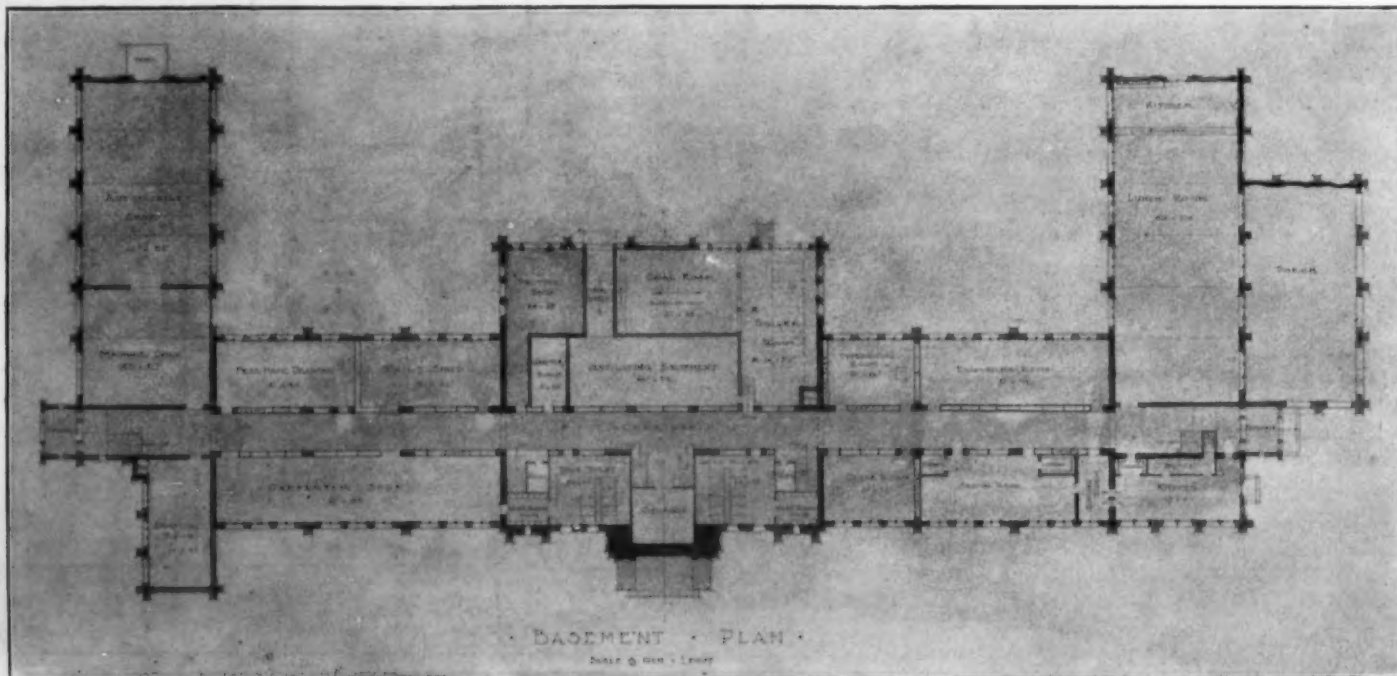
The building is heated and ventilated by means of a split system. The boilers are of the low pressure type and the air for ventilation is washed by washers of the spray type. All air is recirculated and is sterilized by means of an ozone apparatus. The toilets and kitchen have independent exhaust ventilation unconnected with the balance of the system.

The Status of School Ventilation in the United States*

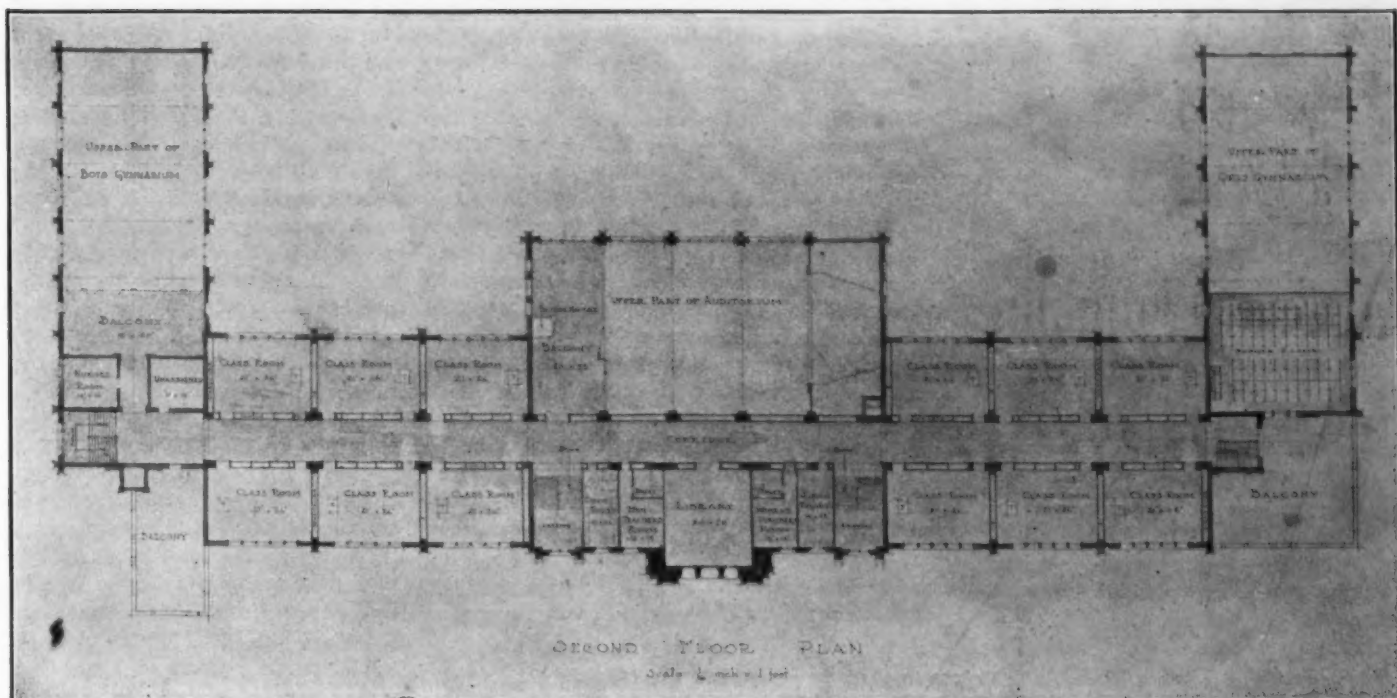
At the semi-annual meeting of 1919, an interesting discussion followed the presentation of the paper entitled, "A Comparative Study of Natural and Mechanical Ventilation for School-rooms," by Legg and Walker, in which the suggestion was offered that a resume of the paper be submitted to the various boards of education

*The present article, which was offered as a report at the annual meeting of the American Society of Heating and Ventilating Engineers, was printed in the Journal of the Society, for March, 1920, and is reproduced here thru the courtesy of the Society.

thruout the country, with the idea of learning their experiences in connection with mechanical forms of ventilation. In accordance therewith a three-page resume containing the principal conclusions that were brought out in the paper, was prepared and sent out to the school boards of 224 cities in the United States, the population of which amounted to 25,000 inhabitants or over. To this communication there have been a number of interesting responses, totalling 22,



BASEMENT PLAN, BYERS JUNIOR HIGH SCHOOL, DENVER, COLO.



SECOND FLOOR PLAN, BYERS JUNIOR HIGH SCHOOL, DENVER, COLO.

and the indications from these were so pronounced as to justify the expectation that a greater volume of responses might show the same general average.

The questionnaire consisted of a resume of tests conducted in the James Burrill Angell school in Detroit, Mich., and a letter inquiring whether the results in the schools of the city addressed, agreed with the results of these tests. The resume read as follows:

Results of Tests Comparing Mechanical and Natural Ventilation of Schoolrooms.

In February, 1919, a series of tests was instituted in a Detroit public school "to determine what qualities must be present in classrooms so that the physical well-being, comfort and mental alacrity of the pupils may be at as high a standard as possible, and thereby render the pupil completely at ease and readily responsive to the efforts and influence of the teacher." To that end, comparative studies were made of mechanical and natural (window) ventilation.

The James Burrill Angell school, a twenty-room, two-story building situated in one of the better residence districts of the city, was selected for the test. The mechanical equipment of the building consisted of (1) a certain amount of direct radiation in each classroom, sufficient to care for 60 per cent of the heat losses of the room; (2) a plenum system of ventilation whereby air was drawn from above the roof is washed,

tempered and humidified, introduced into the room thru supply registers near the ceiling of the inside wall and exhausted by gravity thru registers in the same wall at the floor line. The control apparatus was set to maintain a uniform temperature of 68 degrees Fahrenheit in the classroom and a relative humidity of approximately 42 per cent.

For the test, sixteen typical rooms were selected, eight of which were operated with the regular mechanical ventilation provided by the school equipment. The remaining eight had all ventilation openings blocked off and depended for ventilation solely upon wide-open windows, in accordance with the practices advocated in some cities. The rooms chosen were so located that they had the same exposure and so that a mechanically-ventilated room was directly above a naturally-ventilated room, and vice versa.

In the naturally-ventilated rooms, extra radiation under thermostatic control was installed in front of the windows, which were screened with fine-mesh cheesecloth to break the wind and keep out the dust, and draft. Deflectors were also installed to protect scholars, nearest the windows, from drafts.

It was the intention to collect and classify information upon the following points:

1. Temperature—Dry and wet bulb; to be the average of four selected stations in each room taken daily;

2. Air Motion—Daily readings at each of four stations in a room;

3. Primary Sense Impression—To be the observer's impression upon entering the room. Recorded as "hot," "close," "pleasant" or "cool."

4. Determination of Co.—To be made at each station for purposes of determining (a) the total amount of air supplied and (b) the distribution of air within the room;

5. Dust Count—To be made at each station; determination made with Hill's dust counter;

6. Bacteria Count—To be made at each station by exposing standard Agar plates two minutes and incubating 24 hours at 20 deg. cent;

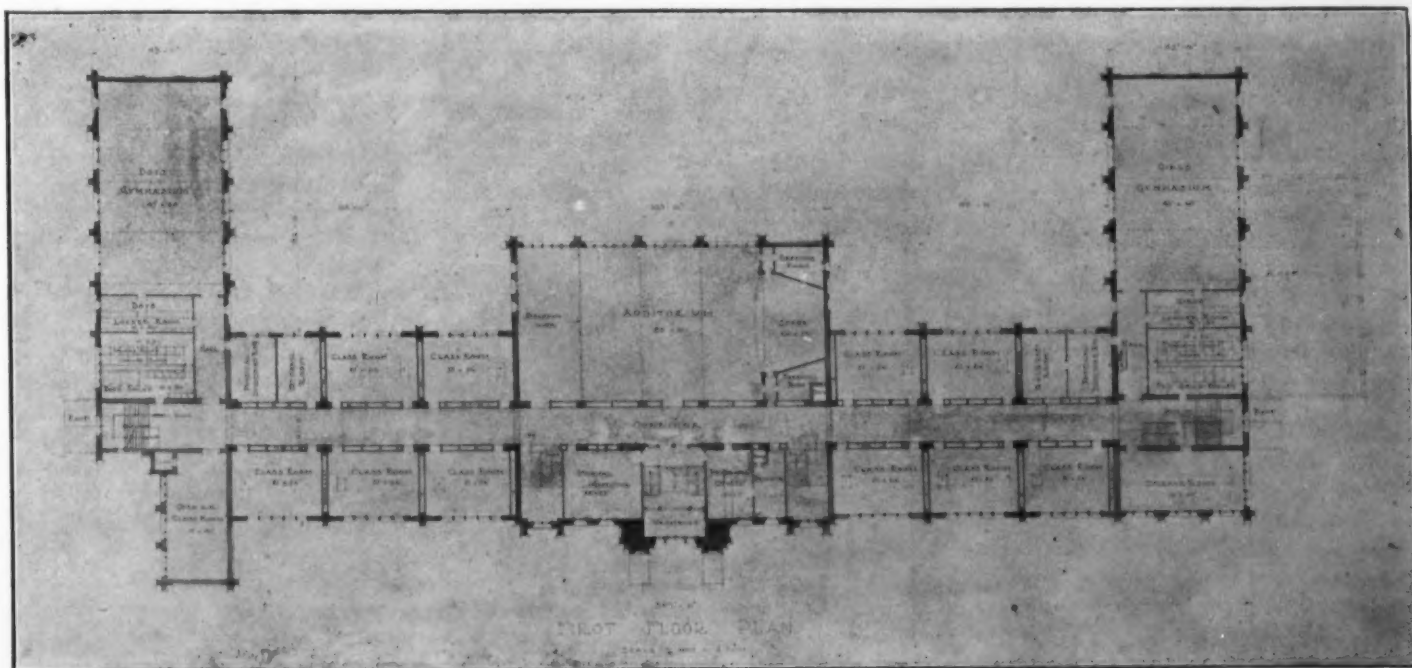
7. Determination of fuel consumption—To be made by measuring condensation from all radiation and from radiation in naturally-ventilated rooms;

8. Determination of mental alacrity of pupils—By means of comparative mental tests similar to the Binet test;

9. Comparison of physical condition of pupils—By careful medical inspection and constant nursing supervision.

It was proposed that these studies should extend over an entire school year but an unforeseen element, the nature of which is explained later, entered into the calculations and prevented the accomplishment of this intention. Because of the short duration of the test, sufficient

(Continued on Page 111)



FIRST FLOOR PLAN, BYERS JUNIOR HIGH SCHOOL, DENVER, COLO.



THE AMERICAN School Board Journal

WM. GEO. BRUCE }
WM. C. BRUCE } Editors

EDITORIAL

POPULAR SCHOOL DEMONSTRATIONS.

The situation in the schools of the country has unquestionably reached a stage where propaganda in their behalf is deemed expedient. Unless the general public is impressed with the true status of school finances the support that school authorities seek will not be forthcoming.

Bond issues, calling for new school buildings, submitted to a popular vote, have been defeated. Measures designed to provide better compensation for the teaching forces have been questioned. The school authorities everywhere have grappled with the problem with a due appreciation of the necessities that confront them. The general public has not as yet been aroused to the shortage of school housing and teachers.

Some communities have resorted to public demonstrations at which the educators and the administrative factors have presented the case to an interested citizenship fearlessly and fully. Under the stimulus of these demonstrations school boards have been encouraged to proceed in more aggressive action and ignore possible criticism and faultfinding.

In some states the school authorities have worked out on methodical lines campaigns whereby the public is to be reached with salient facts and figures and with the arguments for maintaining the schools upon standards of efficiency.

Whatever may be the economic fluctuations of the country at large, the schools must be continued. The public must stand ready to pay whatever the cost. They constitute the very foundation of our political and social structure and must be fostered to the best of our ability if the Nation is to endure.

REPREHENSIBLE NEWSPAPER WORK.

The newspaper man detests the closed door. He abhors executive sessions. He decries secret meetings. Public bodies, he believes, should do their business in the light of day. News matter is the commodity in which he deals. He gathers and distributes it. That is his vocation, his business, his livelihood.

But, the average newspaper also recognizes that in school administrative labors conditions may arise which fully warrant the closed door, the executive session or the secret meeting. Where the reputation of the teaching force, or the moral status of pupils is in question, publicity is likely to prove extremely harmful. Adjustments must be found in a quiet and unostentatious manner. The evil must be remedied without publicity.

The board of education of Bridgeport, Conn., recently found it expedient to consider "behind closed doors" the removal of four veteran teachers for the good of the schools. It desired to respect the feelings of those under consideration from public humiliation.

Next morning a leading newspaper published a verbatim report of the board's deliberations

and boasted that while the doors were closed, the keyhole and transoms were not.

Here was a smart piece of newspaper work. It demonstrated enterprise on the part of the news gatherer. It regaled the curious. But, was it wise? Will such publicity tend to promote the best interests of the Bridgeport schools, or even of the paper which used it?

Newspaper men as a rule are honorable in all their dealings, and keenly alive to the welfare of the community. They will also respect confidences and stand ready to withhold publicity where such publicity is likely to do damage and where this fact is made plain to them.

School officials should bear this fact in mind whenever conditions arise which invite harmful publicity. The tactful school official may meet the overzealous news gatherer on common ground and find an adjustment that will protect the interests of the school system.

THE STATUS OF TEACHERS' PENSIONS.

It is a remarkable fact that the teachers' pension systems of the several states have not yet reached that stage of development where they fully meet the purpose for which they were created, or where they can even be deemed financially solvent.

The expediency of establishing teachers' pension funds has been recognized for many years, but their founders have apparently lacked the necessary actuarial experience to make a correct beginning. Again, the "compromises and concessions" engaged in by legislators have tended to weaken rather than strengthen the pension laws. This is all the more strange since the critical and descriptive literature on the subject is quite voluminous and covers almost every phase of the same.

State after state has engaged in creating pension systems, earnestly striving to improve upon the patterns before them, eliminating the weaknesses of existing systems and introducing new elements of strength in order that perfection might be reached.

And yet, the discussions for sounder and more scientific provisions are still continuing. The operation of the several systems is affording new experiences and suggesting new provisions.

WHO SHALL NOMINATE TEACHERS?

A questionnaire conducted by an Iowa educator reveals the startling fact that forty per cent of the responses received by him from that state report that the school boards employ the teachers without the judgment of the superintendent.

Here we have a situation that deserves discussion. The superintendent, as the educational expert of the school system, is the one person supposedly qualified to judge the character and fitness of the applicant. Surely the average school board member is not.

No superintendent in a commercial enterprise or an industrial plant would for one moment tolerate a condition whereby he could be held responsible for the successful operation of the enterprise or plant without having the authority to choose his lieutenants.

The superintendent who is held responsible for results, and if he is not he ought to be, must also be clothed with the authority to select his co-workers. He knows what to look for in a teacher. The business man does not.

At the present time when the supply of teachers does not meet the demand and the mediocre is placed on a par with the really qualified, the arguments presented may have less force and merit. But, the principle involved here remains the same.

The selection of the teaching force by school boards has the tendency to lead to abuses. Fa-

voritism and political pull have too frequently in the past determined the choice of teachers to the end that the mediocre was chosen to the exclusion of the meritorious.

The progressive school board member declines absolutely to assume the responsibility of hiring teachers. He knows that this method is illogical and irregular. He furthermore realizes that while he assumes the responsibility for the business administration of the school system and exercises a voice in the general policies that shall govern he wisely delegates the purely professional labors to the regularly constituted head of the educational forces.

PRIVATE SUPPORT OF PUBLIC SCHOOLS.

The financial difficulties which confront school authorities of the country have here and there brought a public spirited citizenship to the front ready to aid by private subscription in the payment of better salaries and the construction of school buildings.

The business men in a small Arkansas city raised \$30,000, a wealthy banker in a Texas city offered \$50,000, providing the rest of the citizenship donated a \$100,000 more, and so the manifestations of unselfish support for the integrity of the schools are coming to the surface.

These constitute, in a meagre way, a unique innovation in the history of American schools. At least, they demonstrate a fine spirit and an appreciation of the schools as a factor in the maintenance of progress and social stability.

But, the support thus rendered reveals itself in spots only and cannot solve the problem in its larger and ultimate aspects. The great mass of communities will continue to feel that the schools should be kept upon a high plane of efficiency thru the machinery provided by law. Taxation, after all, forms the center around which all financial problems revolve.

Where the tax limitations tie the hands of school boards and prevent the most urgent and necessary increased expenditures, such limitations must be removed. School boards cannot defy laws and orderly procedure. They are sworn officers of the state and must comply with the letter and spirit of their oath.

Where the exigencies of the situation render it expedient the state legislature must come to the rescue. School boards in states where the limitations have reached an embarrassing stage must deliberate collectively and act jointly. The solution must and can be reached.

Here we do not decry private aid, but such aid cannot reasonably be looked for without the assumption that the public factors have lost their potency and cannot meet an unusual situation when it presents itself.

THE NEW SCHOOL BOARD ATTITUDE.

The complexities which have beset school authorities in finding the money with which to meet them has gradually impelled them to a new and somewhat more courageous attitude towards the public.

The school boards have, in the past, been inclined to apply the soft pedal in asking a tax-paying constituency for more funds. They have usually approached new schoolhouse projects with a certain tactful caution, have permitted needs to assert themselves so as to become obvious to even the most hardfisted taxpayer, and have sought public approval before moving ahead.

Today the public knows that the cost of everything has gone up and with it the cost of maintaining the schools. The public has also come to a higher appreciation of the mission of the schools in the training of citizenship and the

importance of that citizenship in overcoming the radical tendencies of the day.

The school boards, in providing for the schools, are making their demands with greater assurance, in a more decisive manner and with greater confidence of being sustained by public opinion. Conditions would approach the ideal if to their present courage school boards could add foresight sufficient to foresee needs well in advance of their reality.

PETITIONS AND PROTESTS.

Never, within the range of our knowledge, have more petitions been circulated against the action of school boards and more protest meetings staged in various sections of the country in which grievances against the school authorities have been aired, than have been recorded within the present year.

Unquestionably the disturbed conditions in our economic life have caused the public mind to become irritated in some of the other affairs of life. In normal times the school board is a subject for indifferent praise or pronounced denunciation. But, in these disturbed times it has in hundreds of instances become a target for violent opposition.

The facts are that school boards are no better or worse than they have been in years past. They strive, on the whole, to render a patriotic service to their communities and thus enhance the welfare of their country.

Nor are the busybodies more numerous than they have been, or is the public less satisfied with the schools. But, the disturbers are more bold than they have been and are resorting to petitions and protest meetings more frequently than they have in the past.

It is always easy to secure names to a petition. An old saying has it: "Circulate a petition to hang the best man in town and you will get plenty of signatures." Permit a fiery speaker to heap denunciation upon anybody who has some authority in the community and he will have a bushel of followers.

It remains for the school authorities to meet their problems calmly and deliberately, stand fearlessly for the best interests of their charge, and brave unwarranted criticism as one of the unavoidable incidents of the public service.

SALARY INCREASES VERSUS BONUSES.

It is safe to say that the school authorities throughout the land have earnestly bestirred themselves to meet the demands of teachers in the direction of more adequate compensation. While the teachers have not in every instance been justly dealt with, it also follows that school authorities have been confronted with serious financial and legal difficulties. Many adjustments are yet to be made.

In the attempt to provide a larger salary schedule on the one hand and dealing with the school revenue problem on the other, some unique situations have arisen. Some boards have resorted to liberal salary increases graded in accordance with professional training, tenure of service and class of service. Others have met the situation with bonuses granted for the present year, thus deferring to some future time the real question of fixed increased salaries.

The application of these different methods of compensation reveal the fact that the teachers are by no means of one mind in the matter. The teachers at Indianapolis, for instance, oppose the bonus system, preferring a fixed salary increase, while the teachers of Terre Haute, Ind., seriously protest against the school board's failure to provide bonuses.

A commercial or industrial enterprise provides bonuses for its employees as a temporary

addition to the regular compensation. The continuance of such compensation is contingent upon future business conditions and financial ability to pay them. Thus, a bonus is a voluntary, rather than an obligatory or contractual form of compensation.

There are, no doubt, school boards that hold to the thought that the high cost of living is something of passing duration only, and that sharp advances in fixed salaries may later prove irksome and unwise. Hence, the bonus. But, it also follows that teachers' compensations have for years demanded a revision and that they must necessarily be higher in the future than they have been in the past.

The bonus system may serve well as a temporary expedient, but it can never become a fixed part in the adjustment of compensation for teachers and school employees.

RESORTING TO PEREMPTORY DISMISSALS.

Notwithstanding the shortage of teachers we find that school boards in different sections of the country have not hesitated to dismiss peremptorily from the service those who are deemed unfit or undesirable. In some instances the school authorities have publicly stated their reasons and in others they have deemed it wiser not to do so.

In Buffalo, N. Y., a teacher was dropped because, it is alleged, she belonged to a group of Communists. The dismissal will be contested. At Murphysboro, Ill., six teachers were dropped because they belonged to a teachers' union. A protest meeting followed. At Lakewood, O., eleven high school teachers were not reappointed. "We have no charges to prefer against them. We are simply not retaining them," is the school board's answer. Protest has been made. At Oak Park, Ill., a hundred indignant citizens "demand an explanation for the dismissal of two high school teachers," and so on. A dozen more similar instances of the dropping of teachers could be cited.

The conclusion to be drawn here is that the school boards believe that undesirables must be eliminated whether the supply of teachers is meager or not. If teachers foster political theories destructive to our popular institutions, substitute class obligation for public interest, or render service unworthy of the profession, they must be eliminated from the service. Whatever may be said about the rights of teachers—and they have rights which must be respected—the rights of the child, of society, of the state are primary and leading. The authority of the school board must be upheld in demanding these rights. Nor do the rights of the pupil invade upon the rights of the teacher. If the latter creates a condition which retards the best interests of the child or the state, he or she must accept the consequences. The school board is the accredited body that must act for the people and pass judgment.

A UNIQUE SCHOOL MUSS PROPERLY SOLVED.

The extent to which a school controversy may be carried is well illustrated in the case of Lima, Ohio, where a fight to oust the superintendent of schools was publicly staged. The facts, so far as they were ascertained, are as follows:

Superintendent J. E. Collins was charged with having become unpopular with the teachers. Certain board members asked him to resign. He declined. Some one suggested that a poll of the teachers be taken to ascertain their attitude. The vote was 78 for the retention of the superintendent and 28 for his removal. This result was believed by Dr.

Hover, one of his opponents on the board, to warrant his removal.

A newspaper account of the controversy closed with the following unique paragraph: "Dr. Hover declared that if Collins would resign, citizens who have interested themselves in the movement to oust him would be willing to leave the matter of selecting another superintendent to the board of trustees of the Chamber of Commerce."

This paragraph is comical, and notes the extreme to which an awkward situation may lend itself. The citizens who clamored for the superintendent's resignation were willing to entrust the selection of another superintendent to the local commerce body.

Naturally, the question arose, "What is the matter with the school board?" If the public had lost faith in the superintendent, had it also lost confidence in the school board? The inference was that a few more resignations might be exacted by the public and that the commerce body supplant the school board.

The serious phase of the matter, namely, that the unfortunate controversy tended to weaken the discipline of the school system, dampen the ardor of the teachers and undermine the respect of the pupils for the school authorities, was temporarily overlooked.

But, the situation righted itself in accordance with the real merits of the situation. Common sense prevailed. Superintendent Collins was reelected for five years and his annual salary increased from \$4,000 to \$5,000. The school board asserted itself in spite of disgruntled teachers, indiscreet newspaper reporters and gossip trouble breeders.

MAN'S INHUMANITY TO MAN.

Under this appealing caption the Bridgeport, Conn., Times reports the retirement of two school principles who had attained the age of 70. The school board deemed it in the interest of the school system to retire the principals with a pension and place younger men in charge of the schools. But, the newspaper deems the retirement an act of inhumanity and proceeds to severely criticize the board.

It is not our purpose here to support or condemn the action of the school board. The true facts are not known to us. The incident, however, brings to mind the truism that one of the most unpleasant duties of a school board is that which deals with the retirement of an aged schoolmaster. The public is inclined to be sympathetic and consider the interests of the teacher rather than that of the pupil. Teachers in the course of a long and faithful career make many friends who will always come forward loyally when the danger signal is sounded.

The judgment of the superintendent and the school board ought to be accepted by the general public as being more reliable than that of any group of people that stands in an attitude of sympathy and friendship towards the teacher. The educational welfare of the children must have first consideration at the hands of the school authorities.

SCHOOL BOARD JAILED.

Nine members of the Chicago school board were sentenced June 21st to jail or pay fines. The action followed the litigation growing out of the removal of Dr. Charles E. Chadsey from the superintendency.

The court held that Chadsey had been legally elected and the sentences are imposed on charges of contempt of court.

The fines range from \$300 to \$750 and the jail sentences from one to three days. The court scored the defendants most bitterly.

Everybody's Quitting. What? Teaching. Why?

William C. Blackey, Institute for Public Service

Fifty school men and women breakfasting together during the N. E. A. at Cleveland mentioned in thirty minutes fifteen reasons why best boys and girls do not enter the teaching profession. All of the causes are removable. If teachers, superintendents, board members, parents, organizations of all types will face the facts and join in a co-operative effort, the schools of tomorrow can hope to have teachers, instead of facing in 1923 a shortage of 300,000—40 per cent—qualified teachers, and normal schools instead of having no graduates in 1923, which would be the number if the decrease continued for the next three years in the same proportion as the last three, could be turning out more graduates than in the pre-war days.

What's wrong with teaching?—999 out of a thousand give low salaries. This is unquestionably one big reason, but it was the unanimous opinion of the group of fifty representative school people that salary increases alone will not bring in desirable recruits or change teaching's reputation unless the other objections are removed. Salaries are being increased daily, grade salaries of \$100 to \$200 are established facts, wide publicity is furnished by newspapers, educational magazines, national magazines such as the Outlook, Saturday Evening Post, Literary Digest, which is now giving one topic a week in its weekly moving picture film to teachers' salaries; these and other forces are rapidly removing the objection of low salaries, yet we see no rush toward teacher training schools or a decrease in resignations.

Isn't it time to look further for the other reasons for shunning teaching? Dr. Rowland of the Pennsylvania State Department said: "Raise salaries to the sky and we shall still not get a supply of teachers unless we establish at the top of the profession big positions, paying big salaries, as a possible pinnacle to be attained by every boy and girl entering the work." Give us even one position paying \$50,000 or \$100,000 per year and it will attract more ambitious young people into the profession than minimum salaries of \$150 a month.

Six teachers gave up teaching at \$100 per month to enter the chorus of a Broadway theater at a minimum salary of \$150 per month, which was not an increase comparing purchasing value in New York and in the home town, not to be chorus girls for life but because the opportunity existed for each of them to become a star at \$500 a night. Teachers, legislatures, boards who oppose and, in fact, do not urge big salaries for the top positions are contributing their share to the teacher shortage.

Dead level salaries, resulting from minimum salary laws and increases based only on years of experience for all, regardless of ability and interest is an objection that, altho difficult, can and will be removed as soon as the teachers in the ranks demand that ability be recognized, and superintendents and supervisors assume a responsibility that may detract from their popularity.

Comparisons with bricklayers and chambermaids are driving strong young people away. Teachers and others making these comparisons should not fail to emphasize the fact that these are "blind alley" jobs and few, if any, teachers would change places with members of these vocations. In a similar manner cartoons are discouraging prospective teachers. A famous cartoonist shows a bedraggled, dirty hobo being lectured because he has failed to develop his brain and, as a child refused to study. When asked his objection, the hobo says, "I'm a teacher." On the March bulletin and the Cleveland pro-

gram of the National Education Association a cartoon, depicting a parent's attempt to keep their daughter from teaching, appears, that will prevent many boys and girls from selecting teaching as a profession.

Teachers are helping to deplete the profession by throwing mud at their own work. A high school teacher, when asked by a young girl to recommend a good normal school, replied, "I would rather see you go to the penitentiary than to go to a normal preparing for teaching." The eternal, perpetual complaining about the hard time of teaching will never attract more teachers. Aren't there some joys, pleasures, and good times in teaching that can be talked about? A teacher that can't boost teaching ought to enter another vocation, for the example is hurting the teaching profession.

Each of the following additional causes mentioned as contributing to the teacher shortage should be carefully considered:

Girls do not want to be like the women teachers they see.

Insurmountable fences and too much leveling makes the best no better than the worst.

Communities are too fickle in their support, and treat teachers like servants.

Social recognition is denied teachers.

Too seldom are girls appealed to by pictures of the softening and mellowing benefits from teaching.

Supervision "stupervises," chills, restricts and discourages by driving instead of helping.

Teachers are ignored in making school policies.

Academic degrees, disserviceable "pedagees" and hide bound traditions are unduly worshipped by those who run teacher training schools.

Uncertainty of tenure frightens many.

Over certainty of tenure even of the incompetent injures the profession's standing.

Lack of suitable living accommodations.

These shunning reasons are not necessarily a part and parcel of the profession. A little more free and frank discussion at state and national educational meetings, instead of formal 30, 45, 60 minute speeches; courses in teacher training schools taking up these features and how to overcome them; concerted action by educational leaders; commencement addresses on the opportunities of teaching; more democracy in school management; better methods of school publicity are just a few suggestions of removing the objections to teaching.

The big problem, however, is that the school crisis is not in the future but it is here today and unless effort is directed at the objections other than salaries, many more of our schools will be teacherless.

THE COST OF POOR ATTENDANCE.

Scott C. Knoll, Westville, Ind.

The efficiency test has been applied to almost every branch of school activity, with a view to making every "edge cut" as it were. Per capita cost, cost of school supplies and janitorial service cost are investigated each year by the careful school board, in an effort to cutting unnecessary expense here, and to the eliminating of waste there.

Is it not just as important that the school superintendent have accurate available knowledge of the per cent of attendance of his school system, whether that system be large or small? Is it not good business to eliminate, so far as is possible, the absence and tardiness from schools? How may it be shown that these two evils cost the school unit dollars and cents?

I submit a series of curves graphically setting forth the per cent of attendance of the Westville Schools each year from 1914 to 1918 inclusive, together with a period curve for the same length of time. My idea in plotting these attendance curves is accurately to compute the cost of poor attendance in our consolidated school system. I feel sure that the proper emphasis has not generally been placed upon good attendance, and that many schools have a much lower rate than our own. We might inquire into the cause of absence and tardiness, investigate its financial cost to the school corporation, and, at least suggest a remedy.

A study of these curves will show that the attendance is higher at the beginning and at the end of each school year than during the months of January, February and March. Bad roads and weather are not determining factors with us, as the children from the rural districts are transported to and from school. The determining factor is seasonal, preventable illness which breaks into the school during the winter months.

On these graphs ordinates represent per cents of attendance, and abscissas as the months of the school year. The median line indicates the average per cent of attendance for the entire year. By studying the curve, it is possible to determine how far above or below the median the monthly attendance is.

There are a number of petty excuses for absence, but with the proper administrative management all but the most common one can be eliminated. This most common one is sickness, mostly preventable. It is also the only reasonable cause for being out of school, and constant pressure should be brought to bear upon pupils and parents alike to enable them properly to understand this. Pupils must know that, to them, school is a business. In the business world men must be on time.

That we might the better understand the financial loss due to absence, let us consider the following: The average monthly cost to the public of maintaining our schools during the period under consideration was \$1,400.00. This was on a basis of 100 per cent attendance. Suppose, for example, that for one month the per cent of attendance was 95. Ninety-five per cent of \$1,400 is \$1,330. That is, the school has been able to return only \$1,330 for an expenditure of \$1,400. Furthermore, on this basis, here where the per capita cost is approximately \$5 per month, the pupil receives only \$4.75 worth of instruction for \$5 paid out by the school corporation.

It has been shown that a loss of \$70 a month is sustained by our schools when the attendance per cent is even as high as 95. Think what the loss would be in a school where the attendance per cent does not run higher than 85. There are many such schools, too.

My argument ends with the assertion that schools might profitably spend a great deal of money in securing medical aid and inspection for school children. It is poor economy to try to educate the mind at the expense of the body. We need them both. Pupils suffering with defective eyesight, bad hearing or adenoids can never be expected to compete with those who are in normal health. Even tho the teacher does report such defects to the home, yet the parent pays little or no attention to such reports. The health certificate of a trained medical attendant would carry more weight with the parent than the opinion of an ordinary teacher.

To sum up, these points are paramount: (1). Absence is exceedingly costly. (2). Poor attendance is largely caused by illness which is usually preventable and which gradually undermines the child's health. (3). The trained nurse in the school would not only prevent much misery but also greatly improve the character of school work done.



STATE BOARD URGES COUNCILS.

The New Hampshire State Board of Education has adopted a recommendation urging boards of education to organize councils of teachers for introducing a greater measure of democracy into the administration of the schools.

In urging official recognition of teachers, the state board has prepared a letter in which it expresses a desire "that teachers, so far as they are able, shall, by the presentation to the commissioner of education of constructive suggestions and recommendations, participate in the formation of school programs and in the educational policies of the state."

In carrying out its idea for official recognition of teachers the board adopted the following regulation:

"Teachers of any district during September or October may form teachers' councils, these councils to consist of a majority of the active teachers in employment. Councils which are to benefit by these regulations shall elect officers and notify, before Nov. 1, their school board and the state board of education.

"In such districts at least one meeting of the school board each year shall be devoted to a conference on matters which the said board controls, that is, the government, organization and administration of the schools. At this meeting all teachers, or their chosen committee, may be present and the board may explain its plans and policies while the teachers may present their needs and their suggestions for the consideration of school board and superintendent. This meeting is to be for conference and not for formal adoption of plans and policies or for the transaction of business.

"Similarly, such meetings as may be requested shall be held with the superintendent for conference on matters which the superintendent controls, that is, on material for instruction and the methods of teaching."

Connecticut's Survey on Backward Pupils.

The State Board of Education of Connecticut has made a survey of the backward pupils of that state. An extract from the report reads as follows:

"Since the average elementary school has a course of study extending over eight years the normal child entering at six years of age and making a grade each year completes the course at 14; one entering at 7 at the age of 15. In compiling this data a child in the first grade either 6 or 7 years old was considered normal. This is a most liberal allowance for the ages were taken as of September 1 in each instance.

"Figures indicating the extent of retardation of school children thruout the state are as follows:

| | | |
|-------------------|---------|--------------|
| Normal | 135,306 | 62 per cent. |
| Retarded | 33,120 | 15 per cent. |
| Accelerated | 49,688 | 23 per cent. |

"The evil effects of retardation may be classified as follows, says the pamphlet:

- "1. The educational loss to the child himself.
- "2. The educational loss to the state.
- "3. The financial loss to the town caused by this repetition of grades.

"Of these three the first two are the most important. If retarded the child easily becomes discouraged and usually drops out of school at an early age. This means that even the minimum amount of preparation for intelligent citizenship has not been obtained. Furthermore, the child loses much in relation to habit formation for his schooling has been so curtailed that he has not spent a sufficient length of time in school to develop the habits desirable in later life. The state loses the opportunity of adding to its population an educated citizen. The third evil is the cost to the town. It is estimated that there is a direct relation between retardation and expense. That is, if 10 per cent of the pupils in a given school system are retarded the cost to that school system is increased 10 per cent. If this statement is true it means that in general educational expense in the state of Connecticut is increased 15 per cent because of the 15 per cent of retarded children found in its schools.

"The causes of failure leading to retardation may be due to the following reasons:

- "1. Natural inability of the children to do the work assigned them.
- "2. Home environment.
- "3. The organization within the school—perhaps overcrowding of rooms and classes.
- "4. The course of study—may not be adapted to the needs of the children."

FOR BUSY SUPERINTENDENTS.

The Educational Press Bulletin of Illinois has compiled some interesting data relating to high schools for the year ending June, 1919. A parallel comparison between detailed items for the years ending June, 1918 and 1919, is shown. The total enrollment for 1919 was 113,886 as against 111,151; the number of grades was 14,736 against 16,071 in 1918; the expenditures were \$12,464,987 against \$11,410,270 in 1918 and the per capita cost was 88.7 against 78.07 in 1918; the total salaries amounted to \$7,665,351 in 1919, as against \$6,697,414.

It is noted that the total enrollment fell in 1918 and came back to normal in 1919, which is attributed to the great number of high school boys who entered the army in 1917 and who were counted in the general enrollment for the fall term. In 1917 also, the graduating classes were greatly depleted due to the number of boys who left their classes to work on the farms. Many of these, as well as some of the returned soldiers reentered the graduating classes in 1918. The total expense of operating the schools was more than a million dollars over that for 1917, practically all of which was due to the salaries of teachers.

State Superintendent George Colvin of Kentucky advocates the appointment of women truant officers believing them better fitted for this service than men.

The first free evening schools in New Orleans were opened in 1860, with the operation of six centers for a six-month period and a total enrollment of 753. The institution has grown until now there are twelve schools of this character, with an enrollment of 2,000 and a term of seven months.

In the night school of 1860, there were 244 students of Ireland, a total of almost twice as many as came from all the other foreign countries. Among the men there were 125 employed in offices and of the women, 73 were regular house servants, eleven were cooks, one was an embroiderer and a number followed other vocations not the least of which were fifteen washerwomen.

The information was contained in a report of the school superintendent for the year 1860, which was recently unearthed in the school offices.

The Decatur Herald has printed a brief item in criticism of the contract-breaking teacher. The item states that the teacher's contract as a protection to the board is actually worthless. The contract is a more or less formal notification that the teacher will return for the next school year unless a better position turns up.

It is pointed out that the sympathy of the public has been so generally with the teachers in the matter of remuneration, that the school boards have not taken any action toward protecting their rights. The school board may be sued for failing to pay a teacher but a teacher may not be penalized for breaking a contract.

If a better day is coming for teachers, as it most assuredly will when public sentiment realizes the value of education, it is evident that there must come on the part of the teachers a higher regard for business morality, and an end of contract jumping.

West Springfield, Mass. The arrest of two girl students of the high school for the theft of clothing from lockers brought the problem of extravagance in dress to the attention of the school board. Consideration of the matter has led the board to recommend that the students adopt an economical type of uniform dress such as a middie blouse and skirt.

Cincinnati, O. The special committee on high schools has recommended to the Union Board of High Schools that the high school day consist of seven periods and that it extend from 8:30 in the morning to 2:15 in the afternoon. If the recommendation is adopted by the board and the superintendent, it will mean a change from the longer school day to a shorter one. It is the belief of the teachers and parents that the longer school day is not conducive to the best work on the part of the pupils and that the teachers are kept from needed recreation and study because of overfatigue.



NOMINATING A SCHOOL BOARD PRESIDENT.

Anning S. Prall was reelected president of the board of education of Greater New York. The election was accomplished after several ballots. The following was the nominating speech made by Mr. Ryan:

"If ability, fidelity, and conscientious attention to duty are tests of merit and reward, then the candidate I am about to name is entitled to the unanimous indorsement of the members of this board for reelection. President Prall's administration has been marked by fairness, good judgment, and business methods. True, the past year has witnessed many controversies and misunderstandings which were caused by an ambiguous state education law. Fortunately, however, a few legal and authoritative tests have cleared the way for a better understanding and for the enactment of new policies and reforms.

"Things are not always as they seem, and probably time will prove that criticism and calumny are the twin sisters of jealousy when unjustly heralded, while constructive criticism and co-operation are the twin brothers of success. "Therefore, my friends, in recognizing that ability, fidelity, and conscientious attention to duty have their merit and reward, I place in nomination for the office of president of the Board of Education of the city of New York for the ensuing year Anning S. Prall."

SCHOOL PLANT A FACTORY PLANT.

In urging support for the county school commissioners' recommendations the editor of the Adrian, Mich., Telegram urges the following:

"The school faces the same kind of a problem in operation that every factory manager faces. The difference is that the factory manager applies sound sense and up-to-date methods, while the school district too often thinks that the method of our great-grandfathers is good enough.

"No private business concern would dream of building a fence factory to manufacture a few rods of fence per day with even that small amount divided into several different kinds. Nor would any man outside of an asylum maintain four or five little factories when he could put them all under one roof, with one power plant, one superintendent, and each department doing its own proper work. Yet we find rural schools by the hundred in which only a dozen pupils are taught, or even fewer, and often a group of such schools may be found within a radius of a few miles.

"Such a group of small, inefficient schools is exactly on a par with a group of little fence-factories, all in the same town and under the same ownership each with its separate plant and organization, and each turning out its daily dribble of fence. No school with only a dozen, or two dozen, pupils can maintain the kind of a plant that it ought to. No such school can hire as good a teacher as it ought.

"And it is a different world in another respect too—in respect to the demand for education. Modern life sets a fast pace. Those that fall behind are out of luck. The standards of previous generations are obsolete. Whether a boy is to be a merchant, a farmer, a dentist or an engineer, he needs a much better education than he would have needed fifty years ago. If he does not get it, he is handicapped. Nobody can win nowadays against a handicap, in life's swift race; he does well to win at all.

"The authorities in the large cities understand these truths and are acting upon them. They provide schools as good as money can make them, with magnificent equipment and the best teachers. That is one reason why it is so hard for the smaller towns and the country to find teachers. And that is also one reason why it is growing harder every year to keep boys on the farm or in the small town. The city draws them away, like a magnet with superior force.

"The country and the small towns must compete with the cities in education, as in every-

(Continued on Page 72)



NORRISTOWN SALARY SCHEDULE.

The school board of Norristown, Pa., has adopted a salary schedule which provides for four groups of teachers, namely, those with provisional certificates, those with professional and normal certificates, those with permanent certificates and normal diplomas, and those with college certificates. The first group is very small and is expected to be entirely eliminated during the next year. The schedule provides for the following salaries:

Elementary Schools.

Provisional Certificates—Teachers will begin at a minimum of \$700, will be given an increase of \$50 above the minimum and a maximum of \$750. An additional increase of \$12.50 will be given for each unit of credit earned in a college or university course until the final maximum of \$850 is reached.

Professional and Normal Certificates—Teachers will begin at a minimum of \$900, will be given an increase of \$50 above the maximum, and a maximum of \$950. An additional increase of \$12.50 will be given for each unit of credit earned in a college or university course until the final maximum of \$1,050 is reached.

Permanent Certificates and Normal Diplomas—Teachers will begin at a minimum of \$1,100, will be given an increase of \$50, and a maximum of \$1,300. An additional increase of \$12.50 will be given for each unit of credit for a college or university course until a maximum of \$1,500 is reached.

College Teachers' Certificates—Teachers will begin at a minimum of \$1,200, will be given an increase of \$100, and a maximum of \$1,600. An additional increase of \$12.50 will be given for each unit of credit earned in a college or university course until the final maximum of \$1,800 is reached.

High School Teachers.

Female Teachers—Teachers with permanent certificates, or normal diplomas, will begin at a minimum of \$1,300, will be given an increase of \$50 and a maximum of \$1,400. An additional increase of \$12.50 will be given for each unit of credit earned in a college or university course, until the final maximum of \$1,800 is reached.

The minimum for teachers with college certificates will be \$1,300, with annual increases of \$100 up to a maximum of \$1,800. An additional increase of \$12.50 will be given for each unit of credit earned in graduate work at a university, until the final maximum of \$2,000 is reached.

Male Teachers—Teachers with permanent certificates or normal diplomas will begin at a minimum of \$1,400, with annual increases of \$50 up to a maximum of \$1,700. An additional increase of \$12.50 will be given for each unit of credit earned in a college or university course until the final maximum of \$2,200 is reached.

The minimum for college graduates will be \$1,500, with annual increases of \$100 up to a maximum of \$2,200. An additional increase of \$12.50 will be given for each unit of credit earned in a university course, until the final maximum of \$2,400 is reached.

Supervisors and Special Teachers.

Female Teachers—Teachers with special certificates will be given a minimum of \$1,100, with annual increases of \$50 up to a maximum of \$1,400. An additional increase of \$12.50 will be given for each unit of credit of a college or university course until the final maximum of \$1,800 is reached.

Male Teachers—Teachers with special certificates will be given a minimum of \$1,400, with annual increases of \$50 up to a maximum of \$1,700. An additional increase of \$12.50 is given for each unit of credit earned in a college or university course until the maximum of \$2,200 is reached.

Male College Graduates—Teachers will begin at a minimum of \$1,500 and will be given annual increases of \$100 until the maximum of \$2,200 is reached. An additional increase of \$12.50 will be given for each unit of credit in graduate work

at a university until the final maximum of \$2,400 is reached.

Principals.

Female—Those with permanent certificates and normal diplomas will be given a minimum of \$1,200, with annual increases of \$50 up to a maximum of \$1,400. Additional increases will be given until the final maximum of \$1,800 is reached; \$12.50 for each unit of credit in university or college work and \$10 for each school in excess of four.

Male—A minimum of \$1,500 will be paid, with annual increases of \$50 up to a maximum of \$1,700. Additional increases will be given until the final maximum of \$2,200 is reached; \$12.50 for each unit of credit in a university or college and \$10 for each school in excess of four.

College Graduates, Female—A minimum of \$1,500 will be paid, with annual increases of \$100 up to a maximum of \$1,800. An additional increase of \$12.50 will be given for each unit of credit in graduate work at a university, and \$10 for each school in excess of four.

College Graduates, Male—A minimum of \$1,800 will be paid, with annual increases of \$100 until the maximum of \$2,200 is reached. Additional increases of \$12.50 will be paid for each unit of credit in graduate work at a university, and \$10 for each school in excess of four.

It is provided in the rules that a unit of credit shall constitute one hour of classwork in a college or university once a week for thirty weeks. Actual attendance in a college or university class and satisfactory completion of the work of the course are essential to obtain credit. Two hours of laboratory work in a college or university class once a week for thirty weeks counts for one credit.

LARAMIE SALARY SCHEDULE.

The school board of Laramie, Wyo., has adopted a salary schedule for grade and high school teachers. The schedule goes into effect in August.

Grades—First year, \$1,200; second year, \$1,290; third year, \$1,380; fourth year, \$1,440; fifth year, \$1,500; sixth year, \$1,560; seventh year, \$1,620; eighth year, \$1,680; ninth year, \$1,740; tenth year, \$1,800.

High Schools—First year, \$1,400; second year, \$1,490; third year, \$1,580; fourth year, \$1,640; fifth year, \$1,700; sixth year, \$1,760; seventh year, \$1,820; eighth year, \$1,880; ninth year, \$1,940; tenth year, \$2,000.

Supervisors with A. B. Degrees or equivalent are placed on the high school schedule; those without the A. B. Degree on the grade schedule, plus \$60. Teachers of special subjects are on the regular schedule.

MICHIGAN CITY SALARY SCHEDULE.

The school board of Michigan City, Ind., has adopted a salary schedule for next year, under which teachers are divided into three groups. Group one includes teachers with less than 37 weeks' normal, college or university training. Group two includes teachers with more than 36 weeks' normal, college or university training. Group three includes teachers holding diplomas of graduation from a four-year normal, college or university course. The salaries are:

Group One—Minimum salary, \$100 per month, with monthly increases of \$5 up to a maximum of \$150; **group two**, minimum, \$120 per month, with monthly increases of \$5 up to a maximum of \$170; **group three**, minimum salary, \$145 per month, with monthly increases of \$5 up to a maximum of \$195.

It is provided that training of teachers shall be based upon certification from normal school, college or university, setting forth the number of weeks of attendance and credits earned. Service will be based upon certificates issued by officials of the school in which the teacher has given her services, setting forth the calendar terminal dates of such service.

HELENA SALARY SCHEDULE.

The school board of Helena, Mont., has adopted a salary schedule and rules to govern the advancement of teachers. The schedule is as follows:

Kindergarten and Elementary Teachers—After one year of successful experience, teachers will be paid \$1,200; after two years of experience, \$1,350; after three years' experience, \$1,450; after four years' experience, \$1,600; after five years' experience, \$1,700; after six years' experience, \$1,800, and after seven years' experience, \$1,900. No kindergarten or elementary teacher may receive more than \$1,700 for the first year's service in the schools.

High School Teachers—After one year of successful experience, high school teachers will be paid \$1,500; after two years' experience, \$1,650; after three years' experience, \$1,750; after four years' experience, \$1,900; after five years' experience, \$2,000; after six years' experience, \$2,100, and after seven years' experience, \$2,200. No high school teacher may receive more than \$2,000 for the first year of service.

The maximum salary for the director of physical training will be \$2,300; that for the director of manual training is \$2,300; that for the director of home economics is \$2,200; that for the director of drawing is \$2,200; that for the director of music is \$2,200, and that for the director of penmanship is \$2,000.

Principals—Principals of two and three-room buildings will be paid a maximum salary of \$2,000; those in charge of four, five and six-room buildings, a maximum of \$2,100; seven, eight and nine-room buildings, a maximum of \$2,300; ten, eleven, twelve, thirteen and fourteen-room buildings, \$2,400, and fifteen rooms or more, \$2,500.

Elementary and kindergarten teachers to be eligible for appointment, must be graduates of state normal school or other institution of higher learning. In the high school, teachers must be graduates of a college or university and must have not less than one year's experience.

Teachers are entitled to receive full credit for the experience they have had in schools outside of Helena.

After teachers have received a salary which is not less than \$100 of the maximum, they will be expected to attend summer school for six weeks, once in every four years to maintain their salary rank and to evidence their interest in, and their attitude toward, the work in which they are engaged.

Teachers who are absent from school on account of personal illness, not to exceed three days, or who are absent on account of a death in the family, will not be subjected to loss of pay. In case of personal illness, a certificate signed by a physician may be required by the board.

Teachers are allowed to visit schools not to exceed two days in any one year, under the direction of the superintendent, without loss of salary.

Upon special request, the board will grant a leave of absence to teachers desirous of taking courses for self-improvement in educational work, and such teachers will not forfeit their right to the maximum salary by accepting the leave of absence.

Resignations within two weeks or less of the close of school, to take effect immediately, will not be approved by the board, except for illness; neither will teachers be permitted to furnish substitutes during the interval in order to be relieved from the work.

Resignations between September and June are out of order and subject teachers to forfeiture of the unpaid salary which is otherwise due them. An exception is made in cases of illness, or other imperative reasons, where the board finds the resignation necessary.

NEW SCHEDULE FOR SPOKANE.

Spokane, Wash. The board has adopted a salary schedule for teachers which places grade and high school instructors on the same schedule. The only differentiation is due to differences in educational preparation or experience.

The schedule is based upon a starting point of \$850, with allowances of \$50 for each year of experience, and \$150 for each year of educational preparation beyond graduation from a high school.

The minimum for grade teachers is \$1,200 and that for high school instructors is \$1,500. Not to exceed eleven years of experience may be counted for salary increases. This means that for any given educational preparation the range from the minimum to the maximum salary is \$500. Not more than five years of educational preparation beyond graduation from a high school may be counted for salary increases. This means that for any given amount of experience the range from the minimum to the maximum salary is \$750.

Principals in high schools will be given a minimum of \$3,550 and a maximum of \$4,150. Vice-principals will be paid a minimum of \$2,550 and a maximum of \$2,750. Supervisors will be given a minimum of \$1,950 and a maximum of \$2,550.

Junior-high school teachers will be paid on the same basis as elementary teachers. Household arts teachers will be given \$100 above the grade teacher and manual training teachers \$200



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Folk dancing is an ideal medium for bodily expression and a wholesome form of recreation, because it embodies all the principles of physical movement. The old stereotyped calisthenics are being replaced by mimetic exercises, which add thought, play, pantomime, and the charm of music to bodily development. The folk dance is now accepted everywhere as one of the best forms of physical education for growing boys and girls and for adults.

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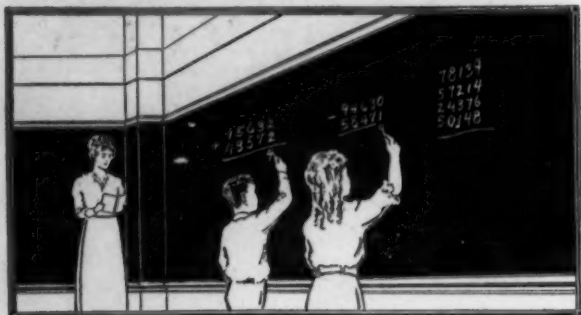
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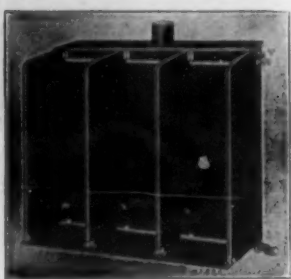
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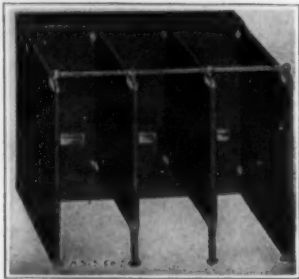
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from our quarries represent the acme of economy and educational efficiency. They require no upkeep, while artificial boards must be resurfaced, repaired and replaced regularly. In comparison, the word "economy" is defined in its truest sense. Slate being non-porous does not absorb anything, so cannot disintegrate. It is finished with a beautiful, velvet smooth surface that does not become gray with age or use; that makes writing a pleasure and reading a relief to the eyes of the students and teachers. That is why our Natural Slate Blackboards combine the utmost efficiency with the utmost of economy.

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SCRANTON SALARY SCHEDULE.

The school board of Scranton, Pa., has adopted a complete salary schedule for elementary, high, night school and continuation teachers, supervisors and principals. The schedule is as follows:

Elementary Teachers—Kindergarten certificate and normal school certificate, grades one to seven, minimum \$900, with increases of \$50 up to a maximum of \$950; kindergarten special certificates and two years' experience and normal school diploma, grades one to seven, minimum \$1,000, with increases of \$100 up to a maximum of \$1,700; grade eight, college diploma and permanent certificate, and five years' experience, minimum \$1,000, with increases of \$100 up to a maximum of \$1,800; ungraded classes, minimum \$1,000, with increases of \$100 up to a maximum of \$1,800.

High Schools—Teachers, minimum \$1,300, with increases of \$100 up to a maximum of \$2,200; heads of departments, minimum \$1,800, with increases of \$100, up to a maximum of \$2,500; vice-principals, minimum \$2,100, with increases of \$100 up to a maximum of \$2,800; principals of high schools will be given a maximum of \$4,350.

Continuation Teachers—Class B Certificate, minimum \$900, with increases of \$50 up to a maximum of \$950; Class A Certificate, minimum \$1,200, with increases of \$100 up to a maximum of \$1,900; principal, minimum \$1,800, with increases of \$100 up to a maximum of \$2,500.

Night School Teachers—Teachers \$3 per night; principals \$3.50 per night; assistant supervisor of night schools, \$4 per night, and supervisors \$5 per night.

Supervisors—Primary grades, minimum \$1,800, with increases of \$100 up to a maximum of \$2,200; head supervisor of special subjects, minimum \$1,500, with increases of \$100 up to a maximum of \$2,200; assistant supervisors of special subjects, minimum \$1,300, with increases of \$100 up to a maximum of \$2,000.

Principals—Teaching principals, with fewer than four teachers, minimum \$1,000, with increases of \$100 up to a maximum of \$1,800; principals with four to seven teachers, minimum

\$1,200, with increases of \$100 up to a maximum of \$1,900; principals with eight to eleven teachers, minimum \$1,500, with increases of \$100 up to a maximum of \$2,200; principals with twelve to fifteen teachers, minimum \$1,600, with increases of \$100 up to a maximum of \$2,300; principals with sixteen to nineteen teachers, minimum \$1,700, with increase of \$100 up to a maximum of \$2,400; principals with twenty or more teachers, minimum \$1,800, with increases of \$100 up to a maximum of \$2,500.

The schedule provides flat increases of \$250 for next year and additional increases of \$200 for exceptional service and for a year's advanced work in college or university. The latter will be paid at the rate of \$100 for each half year's work.

TEACHERS' SALARIES.

Wooster, O. The board has adopted a salary schedule based upon efficiency, regularity and cooperation. The minimum salary for the grades is \$80 a month; the maximum for grades two, three, four, five and six will be \$160 per month, for grades one and seven \$170 per month, and for grade eight \$180 per month. Advances for each year's experience will be at the rate of \$10 per month.

In the high school, the minimum will be \$120 per month and the maximum \$240 per month. The advances will be at the rate of \$15 per month for each year of experience and \$5 per month for attendance at a summer school.

Principals of eight-room buildings will receive \$200 additional to that of the grade in which the principal teaches. Principals of four-room buildings will receive \$100 in addition to the salary of grade taught.

Fairbury, Ill. A new salary schedule has been adopted for the ensuing year. The minimum salary in the grade schools is \$1,100 and the maximum \$1,400. In the Fairbury Township High School the minimum is \$1,500 and the maximum \$2,600.

The school board of Orlando, Fla., has given increases of fifty per cent to the teachers. The increase is one of the largest given in any city in the country and is an illustration of the desire of the board to get and to hold teachers.

Staunton, Ill. The teachers have refused a

\$20 a month raise. The board has declined \$25 increase asked for.

Dighton, Mass. The teachers were granted a flat increase of \$100 per year.

Greensburg, Pa. Salary increases range from 20 to 30 per cent.

Munhall, Pa. The board has raised the salaries of all teachers. Grade teachers will receive from \$145 to \$150; junior high school teachers will receive \$160; female high school teachers will be paid \$200 and male high school teachers \$250. The high school principal will receive \$2,880 and the superintendent \$3,500.

Sioux City, Ia. The board has adopted a salary schedule for teachers under which all instructors are divided into two classes, namely, normal school graduates and college graduates. The salaries paid apply to all teachers irrespective of assignment and represent an increase of 30 per cent in the budget. The salaries are:

Class A—First year, \$110 per month; second year, \$120; third year, \$130; fourth year, \$140; fifth year, \$145; sixth year, \$150.

Class B—First year, \$125 per month; second year, \$135; third year, \$145; fourth year, \$155; fifth year, \$165; sixth year, \$175.

Teachers who complete their sixth year of service at the designated maximum will receive an additional increase of \$100 for each three majors of summer school work equal in value to a major of work completed in the summer quarter of Chicago University.

The majors will have a direct bearing upon the teacher's work in the school in which she is employed and they must be taken in residence.

The board reserves the right to pay special salaries not scheduled, to teachers who have proven merit, a constructive attitude and valuable factors in character, influence and in matters affecting the general welfare of the schools.

Teachers who have taught at least two weeks upon their contract time will be granted sick leave equivalent to fifteen days during a school year on full pay, when accompanied by the signed certificate of a reputable physician, or the school nurse. A leave of not more than ten days on full pay will be given in case of a death in the immediate family of the teacher.

(Continued on Page 64)

It's Time



Your Schools Were Equipped With "Standard" Electric Time Systems

DON'T RUN YOUR SCHOOLS BY OBSOLETE HAND METHODS!

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To meet the severe demands upon pupils, teachers and principals, today, every practical means for conserving time and simplifying school routine must be used.

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Because they have been perfected through years of practical service to their present state of high dependability. Furthermore, they are manufactured, sold, and installed under a method which

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For several years an ever-increasing number of prominent educators have been advocating the use of *movable furniture in schools*, because they appreciate the much greater efficiency which may be obtained through its use.

Furniture of this kind permits a flexibility of arrangement almost unlimited. The floor can be easily and quickly cleared for exercise, social center and evening school work. The most advantageous arrangements are made possible for group work of all kinds, also varied groupings around the teacher which lend an ideal home-like atmosphere to the schoolroom, and eliminate the stiff formality which was ever present with the old type of screwed down desk. The difficulty has been to secure a desk combining all of these features which would be durable and lasting under the hard usage of the ordinary schoolroom. This has been attained in the "Empire" Movable and Adjustable Chair Desk—*built to endure*. All these groupings can be made almost instantaneously with the use of the "Empire" Chair Desks. The bottom of the legs are equipped with steel glides, which permit them to be moved easily and noiselessly.

The "Empire" Chair Desk is made in six sizes to fit the various grades and has five adjustments so that each pupil may be individually fitted.

The adjustments are strong but very simple in construction, easy to operate, nothing to get out of order—no wrench needed.

Thousands of these desks are in use throughout the country. If you will write us we shall be pleased to give you the names of the schools in your vicinity where the "Empire" Movable and Adjustable Chair Desks are in use.

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This new scale is constructed so that it can be entirely operated from either the front or back, both beam and measuring rod. It is just the right height so that the teacher can remain seated at her desk if she desires, and weigh and measure the pupil with the left hand, recording the results on the chart with the right hand. The beam is reversed so that it operates from left to right from the rear. Designed to eliminate all chances of error in adding the weights of the upper and lower beams. Adapted to weigh large numbers of pupils in a short time with the least work. Can easily be rolled from room to room on strong, durable castors.

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Height 50 inches overall. Net weight 55 lbs. Shipping weight 100 lbs. Platform $10\frac{1}{2}'' \times 14''$, either plain or with inlaid cork. Floor space $11'' \times 22''$. With or without castors. Beam—Nickel-plated solid brass; upper bar graduated 10 lbs. by $\frac{1}{4}$ lb., lower bar 290 lbs. by 10 lbs. notched graduations. Marked on both front and back. Measuring Rod—Nickel-plated solid brass telescope measuring rod with self-locking device mounted on the rear with cross piece extending over the beam and down to a height of 39 inches or reaching up to 78 inches,

taking in all ranges of children from kindergarten to high school; graduated both front and back by $\frac{1}{4}$ inch. Cross piece slides out of the way when not in use. Finished in white or grey best oven baked enamel. All of the special features on this scale are covered in pending patents. Avoid imitation and possible difficulties by specifying Continental.

To be prepared order now for immediate or Fall delivery, as the demand for these superscales is heavy and transportation uncertain. Do not delay.



CONTINENTAL SCALE WORKS

3905-11 Langley Avenue, CHICAGO

(Continued from Page 60)

At Kansas City, Mo., the slogan has been adopted "No pay—no teach; a camel lives on his hump; a teacher has none." A flat increase of \$650 a year is demanded.

At Quincy, Ill., the salaries of teachers have been increased from \$300 to \$600.

Teachers in New York City will next year receive higher salaries than any other teachers have ever known. The minimum salary for elementary teachers is \$1,500, the maximum for grades—kindergarten to 6B, \$2,875, and for grades seven to nine, \$3,250. This is an increase over 1919 of from \$600 to \$1,570. Classroom teachers in high schools will receive from \$1,900 to \$3,700, an increase per teacher of from \$1,000 to \$1,100. Elementary principals begin with \$3,700 and in five years reach \$4,750. High school principals receive \$5,500 the first year and in three years go to \$6,000.

Providence, R. I., has increased its tax rate to \$2.35 per \$100 in order to meet the increased salaries of teachers and other public employes.

Swampscott, Mass. Increases of \$400 have been given the teachers.

Green Bay, Wis. The minimum salary for grade teachers has been fixed at \$1,000 and that of high school teachers at \$1,200 a year.

Altoona, Pa. A new salary schedule has been adopted under which teachers are rated good, fair, poor, and very poor. The minimum for grade teachers ranges from \$630 to \$810 and the maximum of \$1,260 is reached after eleven years. The minimum for high school teachers is \$1,215, and the maximum \$1,665 after ten years.

Salt Lake, Utah. The board has given the teachers increases of \$350. The increase raises the maximum for elementary teachers to \$1,650.

Virginia, Minn. The board has fixed the minimum for junior high school teachers at \$1,400, and the maximum at \$2,000.

Indianapolis, Ind. The board has adopted a schedule providing a minimum of \$1,200 and a maximum of \$1,800 for grade teachers. High school teachers will be paid a minimum of \$1,500 and a maximum of \$2,800.

Kansas City, Kans. A total of 189 teachers will be given increases of \$45 per month and 265 increases of \$50 per month.

Norwalk, O. The board has given increases of

\$100 a year to unmarried teachers, and increases of \$200 to married teachers with families.

Jackson, Mich. Increases of \$200 have been given the teachers. The minimum for elementary teachers is \$1,200 and that for high school teachers is \$1,400.

Anderson, Ind. Increases of thirty per cent in salary, with bonuses of \$100 for the present term, have been granted to teachers.

Hillsdale, Mich. Increases ranging from \$200 to \$400 have been given the teachers. The minimum for the grades is \$1,100 and the maximum \$1,400. In the high school, the minimum is \$1,300 and the maximum \$1,600.

Tulsa, Okla. The teachers have been given flat increases of \$360, effective in September next.

Rock Island, Ill. The minimum salary for grade teachers has been fixed at \$900 and the maximum at \$1,250. All between these extremes have been given increases of \$100.

The maximum for high school instructors has been fixed at \$1,800, and all above the minimum but not entitled to the maximum, will be given increases of \$100.

Davenport, Ia. Increases of 25 per cent have been given the teachers. The minimum has been raised from \$840 to \$1,062 and the maximum from \$2,000 to \$2,500.

Superior, Wis. Increases of \$400 have been given to 238 teachers.

Shelbyville, Ind. The high school teachers have been given increases of forty per cent and the grade teachers fifty per cent. Under the schedule, grade teachers will be given a minimum of \$900 and a maximum of \$1,575. High school teachers will receive a maximum of \$2,000.

Quincy, Ill. The board has given flat bonuses of \$150 to the teachers, special instructors, supervisors and principals. In addition, all members of the teaching staff will be given increases of \$200. The minimum salary has been raised from \$800 to \$1,100 per year.

Albany, N. Y. Increases of approximately \$450 per teacher have been provided thru legislative enactment. The minimum salary for grade teachers has been raised from \$800 to \$1,200, and that for high school teachers from \$1,000 to \$1,400.

Herding sheep at \$125 per month, board and

clothes included, is more appealing to the school teachers in Lassen county, California, than teaching school at a salary of \$800 per year, minus \$320 for board. Consequently the teachers of the county are deserting the classroom to take the shepherd's crook.

Miss Cassie Craig of Bieber, Lassen county, in a letter to Will C. Wood, state superintendent of public instruction, says "the majority of teachers, especially the men, will try ranching or some diversity from teaching."

Shepherders are in demand at the wages quoted above, and the employers are only too glad to get the teachers at the salaries offered.

At a meeting of the Kansas City, Kans., board of education, all teachers were given an increase. All those receiving a salary of \$1,248 or above were given a \$540 increase for next year; those receiving less than \$1,248, an increase of \$600. This will give for grade teachers a minimum of \$1,200 and a maximum of \$1,708; junior high school teachers, a minimum of \$1,608 and a maximum of \$1,968; high school teachers, a minimum of \$1,668 and a maximum of \$2,508.

Seymour, Conn. The Board of Education in Seymour has unanimously adopted the following scale: Teachers in grades 1, 7, 8, minimum \$900, maximum \$1,400; teachers in grades 2, 3, 4, 5, 6, minimum \$850, maximum \$1,350; teachers in High School, minimum \$1,200, maximum \$1,600; High School principal, \$2,100; superintendent, \$2,600. Annual increase for each year's experience \$100.

Mr. John A. Rodgers has been unanimously elected president of the board of education at Waukesha, Wis. Other officers elected were S. B. Mills, vice-president, and August Jacobson, secretary and purchasing agent.

Male teachers in high school and manual training will receive a minimum of \$1,500, with yearly increases of \$100 up to a maximum of \$2,100. Colored manual training teachers will be paid a minimum of \$900, with yearly increases of \$50 up to a maximum of \$1,300.

Cleveland, O. The Teachers' Federation recently presented to the superintendent and board of education, resolutions discouraging the incorporation of a merit system in the new salary

(Concluded on Page 67)



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THE volume of tone, tone-control and tone quality of the Columbia Grafonola are not equalled by any other School Phonograph. The volume of tone is sufficient for any Auditorium, Classroom, Hall or Gymnasium purpose.

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The Pushmobile has double doors and is fitted with lock and key, thus protecting the records at all times.

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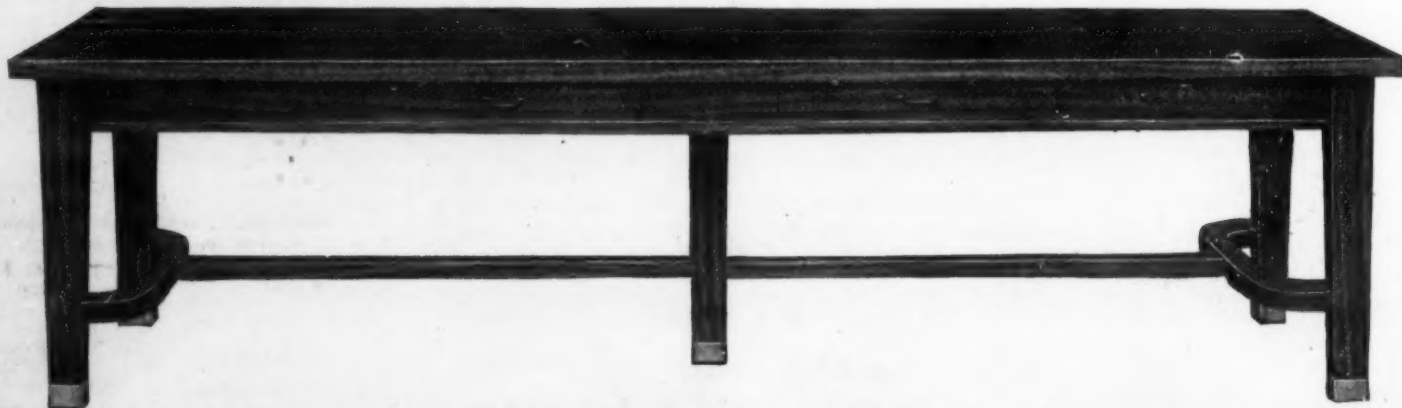
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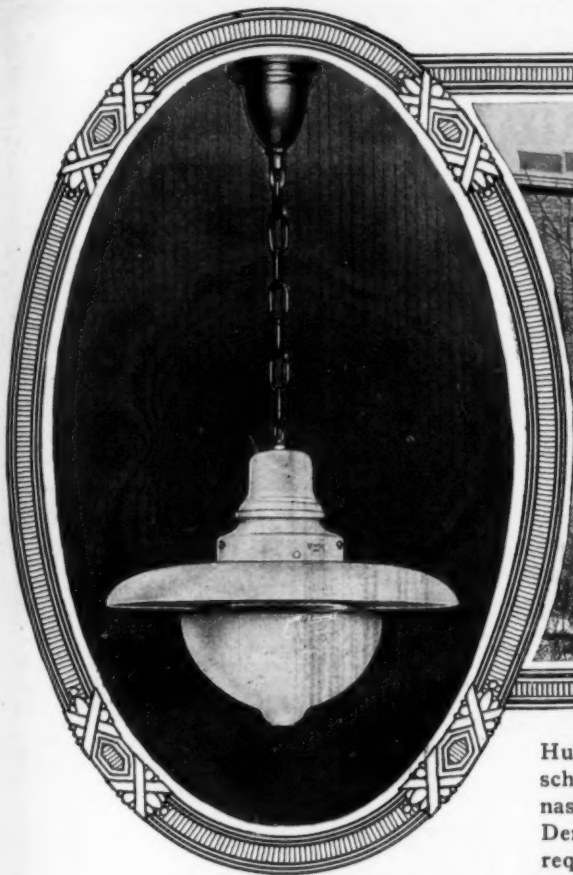
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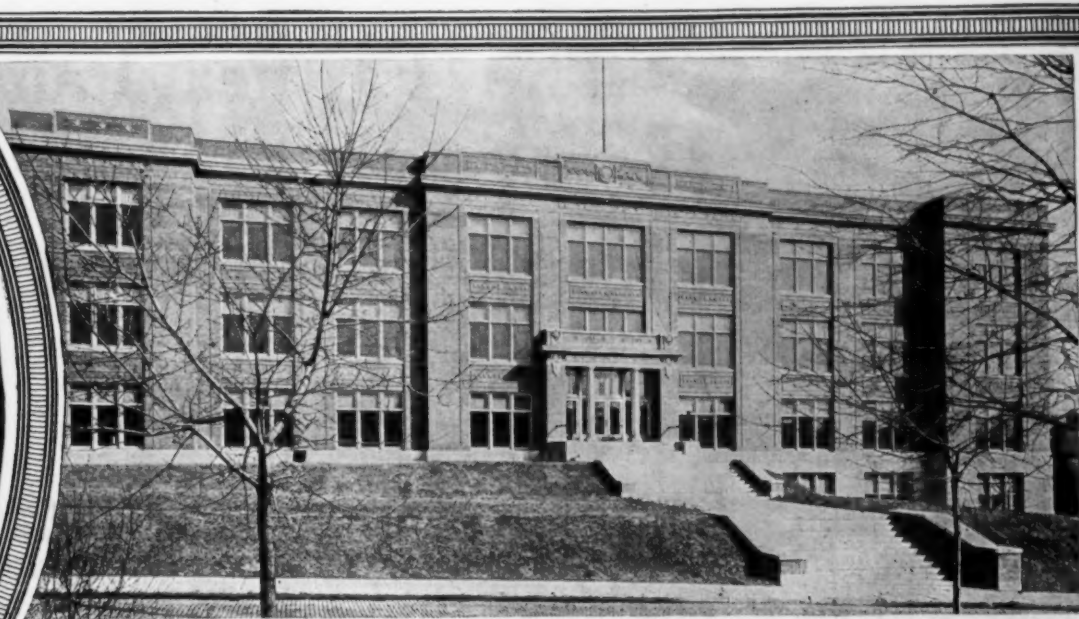
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(Concluded from Page 64)

schedule. The teachers' federation believes that the merit plan would cause discontent and unrest.

The federation asks continued adherence to the principle of equal pay for men and women and requests that a schedule be worked out by a conference committee representing all parties concerned.

The Cleveland board of education has approved a recommendation of Supt. F. E. Spaulding providing for a suggested schedule to be submitted to the teachers. The schedule has been mailed to all the schools and is intended to elicit definite opinions from teachers as to what should constitute a salary schedule.

To encourage discussion, Dr. Spaulding incorporated in the outline, definite increases, and outlined an adjustment of present salaries to the suggested salaries to provide for considerable increases to teachers, effective with the school year 1920-21.

No merit system is provided and the present educational qualifications are named in fixing different maximum figures. Increases for principals or members of the superintendent's staff are not considered to avoid confusion.

Mackinaw City, Mich. The minimum salary for teachers in the grades has been fixed at \$1,000 per annum.

Milwaukee, Wis. The committee on finance of the board of directors has recommended the adoption of the following salaries for high school teachers:

(a) High Schools—Teachers in the high schools receiving their appointment prior to February, 1920, will be paid beginning with the February school month, 1920, and ending with the December school month, 1920, as follows:

CLASS B—Teachers not having served four years in Milwaukee Public Schools will receive \$180 more than in December, 1919, provided this equals their salary of January, 1920; if not, they shall be given an increase not to exceed \$270.

CLASS B—Teachers appointed in February to be placed in the regular schedule—in the class above the salary they received in February.

CLASS B—Teachers on the permanent list with 5 to 13 years' experience inclusive, will receive \$240 more than in December, 1919, provided this

equals their salary of January, 1920; if not, they shall be given an amount to equal January salary.

CLASS B—Teachers on the permanent list with 14 years' or more experience, will receive \$300 more than in December, 1919, provided this equals their salary of January, 1920; if not, they will receive an amount to equal January salary.

ALL "B" teachers in the employ of the school system on or before January, 1920, will in January, 1921, and thereafter, receive an increase of \$120 annually until the last increment, enough to make a maximum of \$2,310.

CLASS A—Teachers not having served four years in Milwaukee Schools, will receive \$270 more than in December, 1919.

CLASS A—Teachers on the permanent list in Milwaukee Public Schools will receive \$360 more than in December, 1919, provided this equals their salary of January, 1920; if not, they will be given an amount to equal January salary.

ALL "A" teachers in the employ of the school system on or before January, 1920, will in January, 1921, and thereafter, receive an increase of \$180 until the last increment, which will be enough to make a maximum of \$2,880.

No Class "A" teacher in 1921 will be below the minimum of his class. When properly placed, he shall follow the regular schedule.

VICE-PRINCIPALS will receive \$360 more than in December, 1919, provided this equals their salary of January, 1920; if not, they will be given an amount to equal January salary.

All vice-principals in the employ of the school system before January, 1920, shall in January, 1921, be placed in the minimum of the regular schedule. Teachers appointed after January, 1920, shall be paid according to the following schedule:

Class B, first year, \$1,110; second year, \$1,230; third year, \$1,350; fourth year, \$1,470; fifth year, \$1,590; sixth year, \$1,710; seventh year, \$1,830; eighth year, \$1,950; ninth year, \$2,070; tenth year, \$2,190; eleventh year, \$2,310.

Class A, first year, \$2,310; second year, \$2,430; third year, \$2,550; fourth year, \$2,670; fifth year, \$2,790; sixth year, \$2,880.

A committee of the Wisconsin Teachers Association is making a survey of the salary situation in that state. It has thus far established the fact that the salaries in 30 leading cities of the state average as follows: Grades, minimum

\$961.35, maximum \$1,283.33; high schools, minimum \$1,209.10, maximum \$1,784; men in grades, minimum \$1,275, maximum \$1,975; high school principals, minimum \$2,106, maximum \$3,373.

JOHNSTOWN SALARY SCHEDULE.

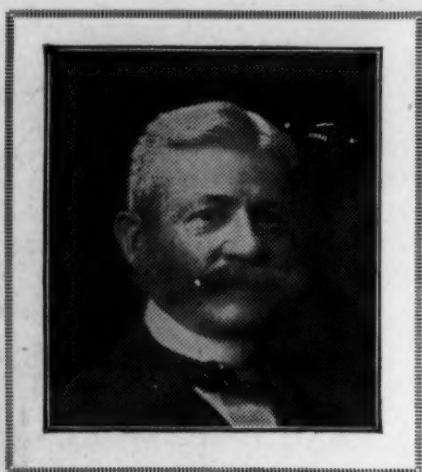
The school board of Johnstown, Pa., has adopted a salary schedule which is considered a radical departure from the conventional rules and classifications for teachers' compensation. Features of the schedule are the elimination of the conventional basis of salary schedules, recognition of the principle that teaching is a profession and requires acquaintance with the best and latest thought, subsidized universal professional training thru residence courses in colleges and universities, and the promotion of professional interest thru extra compensation beyond the maximum, for additional professional work in extension classes. The schedule which provides two classes of instructors only, is as follows:

Schedule A—Salaries of college graduates, four-year curriculum, college, provisional, college permanent, temporary or special certificates, will be as follows: First year, \$1,050; second year, \$1,200; third year, \$1,300; fourth year, \$1,400; fifth year, \$1,500; sixth year, \$1,600; seventh year, \$1,700; eighth year, \$1,800; ninth year, \$1,900; tenth year, \$2,000; eleventh year, \$2,100, and twelfth year, \$2,200.

Schedule B—Salaries of normal graduates, two-year curriculum, professional permanent, temporary or special certificates, will be as follows: First year, \$900; second year, \$1,000; third year, \$1,050; fourth year, \$1,100; fifth year, \$1,150; sixth year, \$1,200; seventh year, \$1,250; eighth year, \$1,300; ninth year, \$1,350; tenth year, \$1,400; eleventh year, \$1,450, and twelfth year, \$1,500.

With a view to getting better pay for teachers Edwin R. Snyder, state commissioner of vocational education, advocates the organization of all public school teachers of California.

Snyder suggests that teachers first form temporary organizations and then arrange to work out a state organization. The question of relationship of the federation should bear to the California Teachers' Association, he declares, need not at this time disturb anyone.



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SPRINGFIELD, MASS.

FOR BUSY SUPERINTENDENTS.

(Concluded from Page 57)

In opposing "daylight saving" the Rockland, Mass., Standard says: "The school teachers already notice the effect of the daylight saving law on their pupils. They say the children appear tired, and are tardy and sometimes absent because they do not waken in time to get ready for the morning session of school. It is hard for a child to go to bed before dark, and even if they go to bed they rarely go to sleep while it is still light. The majority of children are now out of doors until after 9 o'clock, consequently they cannot get the necessary amount of sleep in time for prompt attendance at school, unless they are awakened before Nature says that they have had sleep enough. Some mothers are willing to do that, but others are not. Sleep is as necessary to a growing child as the food it eats, and this daylight saving is injuring the health of the children. The children and farmers must suffer in order that automobilists may have an extra hour of enjoyment."

Munhall, Pa. Supt. C. R. Stone has worked out a very effective method of securing home reading by the pupils. School credit is given for this work and each pupil from the fourth to the eighth grade inclusive, is asked to read eight books outside of school and to make an oral report to the teacher. During the past year about 200 pupils reported they had read ten or more books, each of whom will receive a certificate to which is attached a gold seal for reading ten additional books. It is estimated that more than half of the certificates this year will have one or more seals attached.

Supt. C. R. Stone of Munhall, Pa., has inaugurated the practice of issuing to the teachers, a weekly bulletin of announcements, instructions and advice relative to the best material to be found in the school magazines and information contributing to the general encouragement of teachers.

The school board of Peoria, Ill., has requested automobile owners to permit the gratuitous use of their cars to convey teachers to the schools pending a local street car strike.

The Cincinnati Board of Education will ignore

an opinion given by the attorney general that teachers should be paid for the entire time they are absent on account of illness.

The school board of Buffalo has brought legal proceedings compelling the city council to provide greater appropriations for the schools. The "power to make appropriations is vested in the council" and "the application of the sums expended rests with the school board."

Allentown, Pa., has increased school taxes one-half mill--total ten and a half mills.

Fort Madison, Ia., will meet school congestion by building barracks. A firm of contractors engaged in the construction of a schoolhouse went into bankruptcy. The sub-contractor sued the school board and the bonding company for their claims and won their case.

A controversy between the parents in Essex County, New Jersey, on one side and the Board of Education and the Board of Health on the other, involving the old question of compulsory vaccination of school children, has ended in favor of the parents. The contest covered considerable time and brought into play as testimony legislative resolutions covering the precise points at issue, two of which supported the claims of the parents so concisely that the Board of Education immediately rescinded its vaccination order and several hundred children temporarily deprived of school privileges have returned to their studies. Parents and teachers in New Jersey are now the judges of the necessity for vaccination and parents opposed to compulsion believe the troublesome question has been settled.

The turning point in the affair was reached when the parents' organization sent a delegation to Trenton to learn whether the word "may" in the health law should be interpreted as "must," as claimed by the Board of Health. It was found that by specific resolution in the legislature "may" is read and defined as "may," not "must," and further, that the Board of Health has no legal right to order the Board of Education to do anything, altho the health authorities may, in case of epidemic, close schools. When the Board of Education learned that it was relieved of the "must" interpretation for "may"

and that it was under no legal obligation to obey orders from the Board of Health, the way was open for revoking the order for compulsory vaccination, a step that was taken without delay.

Some of the school authorities in Illinois cities have brought so-called "Father's Clubs" into life with gratifying success. The Decatur Herald says: "The remarkable thing is that manufacturers, and shop workers, bankers and brakemen in blue shirts should be drawn together for a common purpose because they have children in the same school, and should work together for the same object, that school's good."

Superintendent Harold Bates of Milford, N. H., was elected president of the Merrimack Valley Teachers' Association.

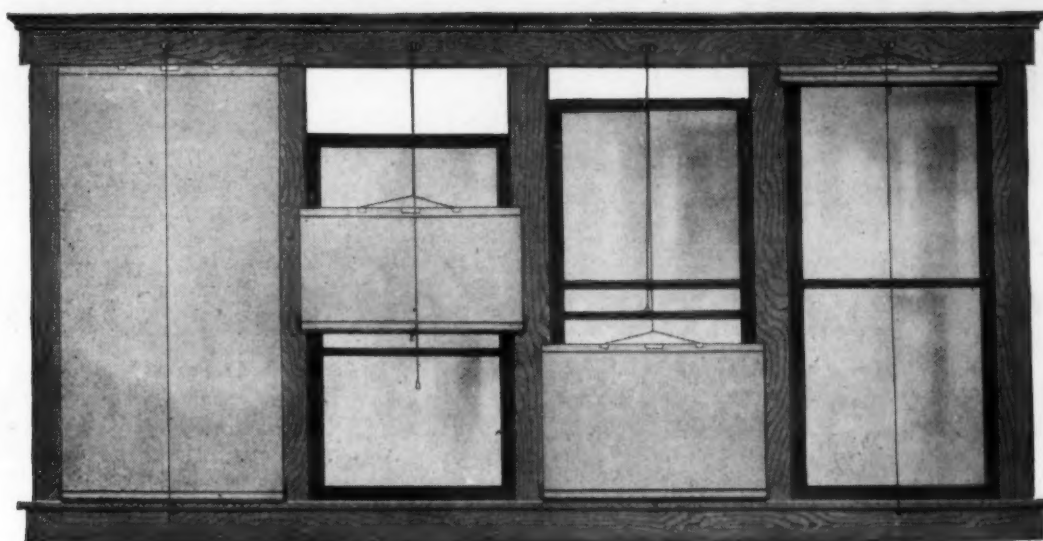
The statement is made at Bridgeport, Conn., by Superintendent Samuel J. Slawson that "Friendship ceases, political pull dies; business begins. The initiative must rest with the teacher, the responsibility with the principal. Responsibility does not rest in one man known as the superintendent. He can get nowhere unless you people see that the work is done."

An interesting situation has arisen in San Antonio, Texas. George W. Brackenridge, a wealthy citizen, offered to donate \$50,000 towards a 25 per cent raise in the teachers' salary provided the business men of the city would raise \$100,000. Because 50 per cent of the teachers had joined the American Federation of Teachers which is affiliated with the Federation of Labor the business men declined to act. In consequence Mr. Brackenridge withdrew his offer with the statement: "In no concern of the public service should there be more independence of class or group selfishness and dictation, more freedom from the domination of special interests, than in the vital and fundamental concern of public free school education."

"Magnificent Temples of Education Served by a Starved and Starving Priesthood", is the way Ex-President Taft discusses the teachers' salary question. After a trip thru middle and southwest Texas he remarks: "Without being hypercritical, one would judge that the school plants are more elaborate and expensive than they need to be to accomplish their proper purpose."

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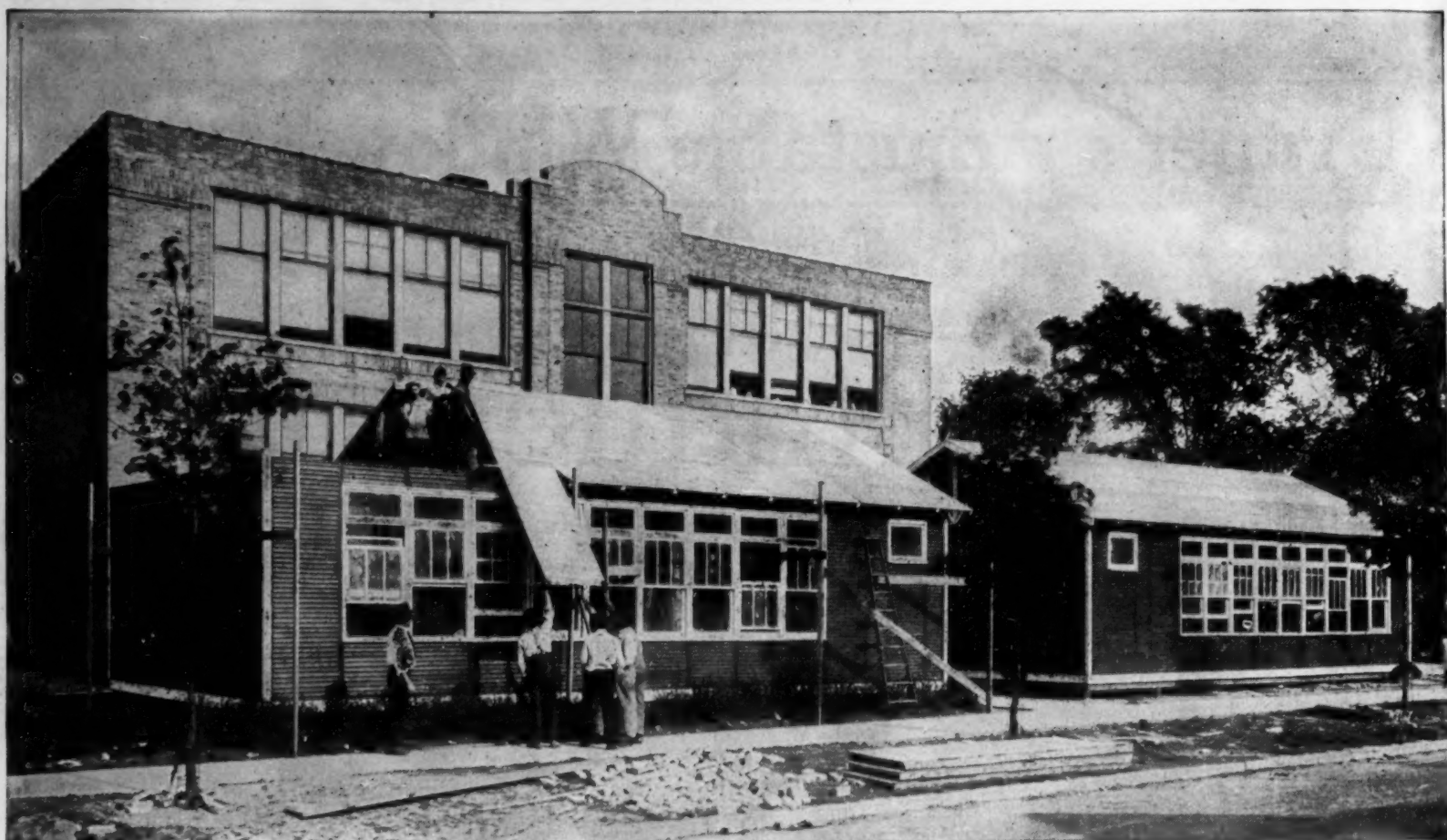
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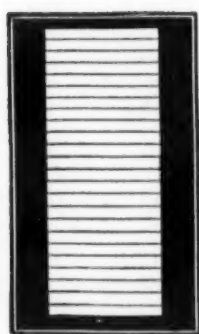
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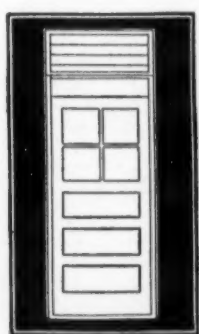
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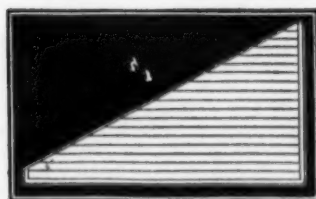
Note also that “Circle-A” Schools provide maximum light; they require no elaborate erection diagrams or small parts; the units are interchangeable; salvage value is 98%, and—they are ready at conveniently located plants for prompt shipment. For further information, write or wire the nearest office listed below.



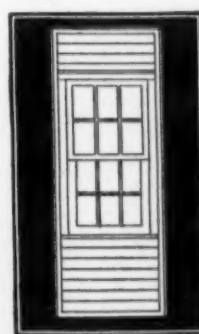
Roof unit



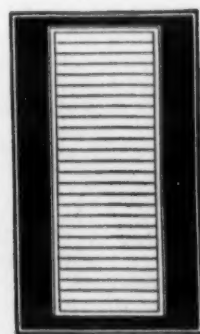
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SCHOOL BOARD NEWS.

(Continued from Page 57)

thing else. In fact education is the most important field of competition; if we lose there, we are beaten. Rural Michigan with its educational work scattered among thousands of districts, run by more than twenty thousand school officers, is at a great disadvantage in this competition. The consolidated rural school affords at least a partial answer to the problem. It is the logical plan and the coming plan."

BOARD ADVISES AGAINST AFFILIATION.

The school board at Oklahoma City, Okla., has advised the teachers of that city not to join the American Federation of Labor. The Oklahoma Times in commenting the action, says:

"Instructors in the public schools are engaged in public service. Their salaries are paid by the general public and it is to this public that they owe an undivided allegiance in so far as the duties of their position are concerned. Inasmuch as non-union taxpayers constitute the great majority of the masses of the people, it is manifestly unfair for teachers or any other public officials or employees to bind themselves to work in the interests of a union minority. This is true whether the teachers go on a strike or not. Membership in a labor union affiliated with other unions or with the American Federation of Labor is bound to prejudice the instructors in favor of the union viewpoint. And this prejudice they would most likely be inclined to transmit to the members of their classes.

"The public schools certainly should be free from the controversies between capital and labor. It is upon the schools that this country must depend for the greater part of the training which the boys and girls receive in the obligations of citizens toward each other and toward the community. It is unwise that children shall leave school prejudiced in favor of strikes which are intended to bring about the granting of demands by making the public suffer.

AMONG BOARDS OF EDUCATION.

School boards of 32 counties in Iowa have

formed a permanent organization. It expressed the belief that teachers were not quitting the teaching field for lack of adequate compensation, and went on record as being against the policy of reckless outbidding neighboring schools to an unknown extent as in past years. The following officers were elected: President, Glen J. Smith of Riceville; vice-president, A. T. Smith of Boone; secretary-treasurer, R. E. Hess of Kinsley; executive committee, F. E. Finch of Fayette, Mrs. H. F. Barnes of Manson and W. S. Slagle of Alton. The organization will meet on the third Thursday of November of each year.

The school board at Holyoke, Mass., has been sued for \$10,000 damages by the parents of a child that was injured at the school by the falling of a slate slab standing against the wall in a girl's lavatory. The accident resulted in the fracture of the child's knee.

The high school teachers of Philadelphia have united in a cooperative basis for the purchase of their household and personal needs.

Marlboro, Mass., has inaugurated a "Stay-in-School" movement. The alluring wages offered have caused an exodus from school to factory. The editor of the Enterprise says: "In the past it was considered a worthy ambition to learn a trade even when seven years were required to complete the course. Now, three years is thought too many to spend in such a subordinate position. At least keep them in school as long as possible, for the training there will fit them better to accept new conditions, and comprehend novel requirements. If the schoolboy learns to think, it is in itself a long step in the right direction."

A "School Visiting Week" was held at Kane, Pa., during the week of May 10 to 14. In connection with the visiting week, a campaign was begun for providing additional school revenue to support the schools and to keep them up to standard.

Portsmouth, N. H. The daylight saving plan has been put into operation in the schools and business places.

Springfield, Mass. The board has raised the tuition fee \$25 for each non-resident student.

The increase was made because of the larger operating cost of the school plant.

The Indiana Schoolmen's Club has been asked to support a school program calling for a state board of five members and for the election of the state superintendent by the state board. The suggestion was made by the Club's educational committee which pointed out that the present board is too large to be efficient. It is held that the members should be trained schoolmen and that centralization of power need not be lodged in the state board but that the latter should be a harmonizing body to make uniform school practices in the state.

St. Louis, Mo. The board has adopted rules to govern the wider use of school buildings and to provide for the collection of fees. It is provided that free use of the buildings shall be granted for meetings of teachers for professional purposes, meetings of pupils of the schools, meetings of patrons or parent-teacher associations, and meetings of established social centers.

The schedule of prices for outside use of the buildings is based on the actual cost of such use. The fees range from 75 cents for the use of a classroom, in connection with the use of an auditorium, to \$19 for the use of the latter.

The school authorities at Rudd, Ia., have taken action toward the erection of a home for the superintendent of the Rudd Consolidated District. The building which will cost \$9,000, is to be provided thru the sale of bonds. The superintendent will pay rent the same as other tenants.

Public cooperation to fill a public need has been sought by the board of education of Sioux Falls, S. D., in disposing of \$500,000 worth of school bonds. It is proposed to erect a grade school and to provide additional accommodations at the high school.

Westfield, Mass. Simplicity in dress was agreed upon by the high school graduating class to meet the high cost of living and to effect greater democracy in school. A limit of \$12.50 was set in the cost of graduation apparel.

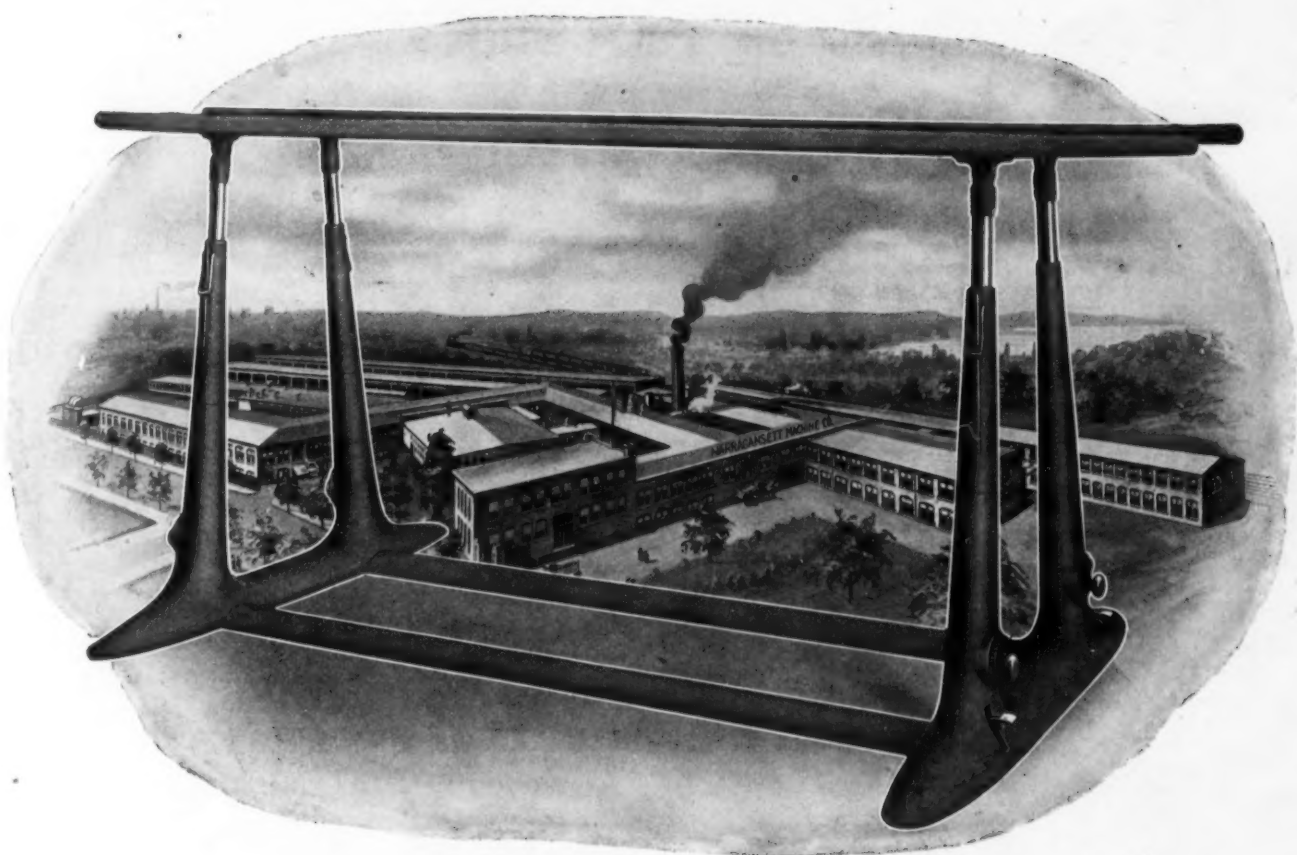
Brunswick, Me. The school board has adopted

(Concluded on Page 75)

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BOARD OF EDUCATION,
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Per *E. E. Edwards*
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We Guarantee our Casmire Process to be just as represented, and we will sell you enough of our Casmire Process and our Refinishing Materials, loan you our Tank, with the understanding that after you have cleaned 50 to 100 desks, if you are not entirely satisfied with the results you obtained, and our materials do not meet our claims, you may notify us, by wire, and we will give you shipping instructions on the unused portion, and we will not charge you one cent for the materials used in cleaning the 50 to 100 desks.

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(Concluded from Page 72)

a combination of the daylight saving and standard time. Primary and grammar grades operate on the daylight plan and the high school and rural schools on the standard schedule.

Beverly, Mass. Following its annual custom, the school board made a tour of the city school buildings for the purpose of inspecting and making note of repairs to be made during the vacation period. At the close of the inspection, the members were treated to a dinner given by the girls of the tenth grade domestic science classes.

The dinner is given annually to show the character of the work done in the department and to demonstrate the training which the students have received. Effective correlation was demonstrated by the fact that the menus were decorated by the art students and printed by the manual training department.

The dinner was prepared and served with the assistance of fourteen girls, working under the direction of the instructor.

Lancaster, Pa. The Central Labor Union has adopted drastic regulations directed against the school board because it has failed to reelect 82 teachers who had organized a branch of the American Federation of Teachers. The board is holding firmly to its decision not to reemploy the teachers until they have severed their membership in the organization.

St. Joseph, Mo. The school board has adopted an amendment to its rules, providing that a teacher may be dropped from the corps for insubordination or failure to work in cooperation with the administration.

Rockford, Ill. The school board has dispensed with the services of census enumerators for the present year because of a lack of funds. As a substitute it was ordered that the school census be conducted by the teachers and pupils of the Eighth A grades.

Under the plan, each class was given a leave of absence of two days to make the canvass of the school districts adjacent to their respective buildings. The work was arranged and carried out in such a manner that it was easily and quickly completed.

Lynn, Mass. The school board has ordered the continuance of the high school administrative council to the end of the school year. The council which consisted of eight members, most of them teachers, had been conducting the school in the absence of a principal. They were paid \$5 each per week for their services.

Binghamton, N. Y. Mr. F. H. Smith has resigned as secretary of the board.

Clinton, Ia. The board has ordered the installation of fire alarm boxes in the grade schools. A fire alarm system has been provided for the high school.

Lincoln, Neb. The court has upheld the right of the school board to expel high school students who join fraternities contrary to the state law. A number of boys, nearly all of them seniors, had been suspended because of such membership.

Mr. C. L. Wooldridge has been appointed a member of the Board of Public Education of Pittsburgh, Pa., to succeed Mr. Taylor Allerdice, resigned. Mr. Wooldridge will act as chairman of the board's property and supplies committee and as such will have supervision of the school building program.

The school board of Youngstown, O., has upheld its previous decision to remove Supt. N. H. Chaney and appoint a new man in his place. In making the change, Dr. Chaney will be allowed to serve as superintendent-emeritus for a year in order that he may obtain a pension. The second decision came as a result of petitions of seven thousand persons that the board change its action relative to the superintendent.

Mrs. Lelia C. Leidenger has been named as a candidate for membership on the board of education of Louisville, Ky. Mrs. Leidenger is the first woman candidate for the board.

Philadelphia, Pa. The board has discontinued the use of the regular spelling books and will replace them with texts of its own compilation. The action is based on the fact that the spelling books do not contain words used in regular correspondence and common business practice, and on the further fact that the ordinary spelling vocabulary taught pupils is 500 words more than are used in business practice.

The Committee on Rules of the Milwaukee Board of School Directors has recommended that high school principals be required to devise and adopt a uniform system of accounting. Each principal will be required to submit a report at the close of each semester and the board will reserve the right to have accounts audited at any time.

Logansport, Ind., has a unique school board tangle. Three of the five members of the board decided to fire the superintendent. They told him on March 24th to file his resignation before night. Two of them believed this to be a mistake. The Chamber of Commerce, civic and labor organizations, mothers' clubs, and the teachers upheld the minority.

The three school board members who are charged with failure to visit the schools, with ignorance as to the educational leadership of the superintendent, and with lack of knowledge as to what constitutes a good school system, are now asked by the several bodies named to resign.

Superintendent A. H. Douglass is regarded as an inspirational leader of the teaching forces, and is said to have accomplished most satisfactory results for the schools of Logansport. The outcome will be watched with interest.

Sheboygan, Wis. Teachers in Class A will be given bonuses amounting to \$10 per month, and those in Class B, bonuses of \$75 for the year. Teachers in service more than one year will be given increases of \$10 per month. The minimum salary for grade teachers has been raised to \$1,000 per year.

Eau Claire, Wis. The board has substituted the percentage basis for the so-called merit system. Grade teachers will receive a minimum of \$90 per month and a maximum of \$110 per month. Women high school teachers will receive a minimum of \$1,100 and a maximum of \$1,600. Men high school teachers will be paid a minimum of \$1,300 and a maximum of \$1,800.

Mr. Geo. E. Davis of Iowa City, Ia., has been elected superintendent of schools at Fontanelle, at a salary of \$2,875.

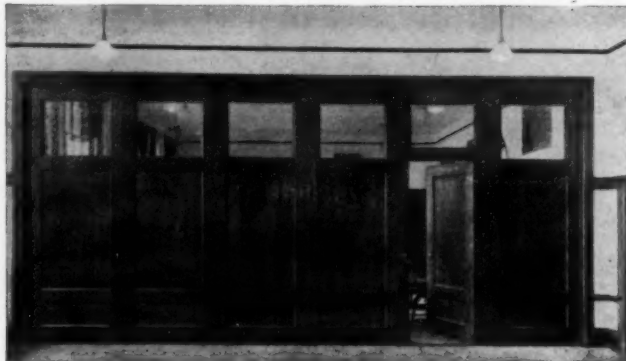
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DELAWARE SCHOOL FINANCES

The Auxiliary Association of Delaware, in a report to the State Board of Education, presents a resume of the educational situation within the state. The Auxiliary Association was incorporated under the laws of the state to administer the trust fund of \$2,000,000 established by Mr. Pierre S. DuPont for school buildings, equipment and grounds.

In 1916 the state of Delaware occupied the thirty-ninth place in the educational standing of the states. By action of the legislature in 1917 a Commission was appointed to study the educational situation, to harmonize, unify and revise the school laws and to evolve an improved and effective system of public instruction for the state. The commission named by the Governor, recognizing that the task required trained schoolmen, asked and obtained the services of the General Education Board of New York City, which had just completed a survey of Maryland.

A thoro study of the educational situation was made in 1918, and the result was embodied in a report to the Governor in February, 1919. The new school code which was based upon recommendations contained in this report, became a law in April, 1919. The law went into effect in July, of that year, with the appointment of a State Board of Education on non-partisan lines.

Later in the summer of that year a Committee composed of Dr. G. D. Strayer, Dr. N. L. Engelhardt and Dr. F. W. Hart was appointed to study the condition of the school buildings.

Every school in the state was studied and scored according to a scientific measuring system and resulted in revealing serious conditions.

The Survey Committee was instructed to continue its studies and to present recommendations as a starting point in the study of the problem in the hands of the school officials and the interested public.

The survey made by Drs. Strayer, Engelhardt and Hart forced the condition of the school buildings into the foreground and led to the establishment of the P. S. DuPont Trust Fund. Mr. DuPont's first gift in July, 1919, was in the amount of \$2,000,000 to assist in the erection of schoolhouses thruout the state. Four hundred thousand of this amount was set aside for the rebuilding of schools for colored pupils. A further gift of \$500,000 was made in October for this purpose, making \$900,000 in all for the benefit of colored children. These gifts were later augmented by \$169,000 to make funds available for a tentative program outlined by the Auxiliary Association.

To secure buildings of the best type and to afford each district a school structure that should be adequate, permanent and fitted to its needs, the State Board prepared a volume entitled Standards and Plans for School Buildings. The work which was undertaken by educational authorities of national standing, provided plans and specifications for buildings based upon the best results of school architecture in the United States.

The Auxiliary Association, at its own expense, engaged Mr. James O. Betelle, of the firm of Guilbert & Betelle, Newark, N. J., as architect for the several structures. Mr. Betelle's services were placed at the disposal of any county or special district board, altho no board is excluded from selecting and engaging its own architect.

The Auxiliary Association has at its disposal \$2,669,000, of which amount \$900,000 is set aside for colored schools and \$1,769,000 is available for the building of white schools. The amounts thus far pledged and placed at the disposal of the county or special district are: New Castle Coun-

ty, \$600,000; Kent County, \$469,000; Sussex County, \$600,000.

The association has fourteen sites for white schools, with an approximate acreage of 116.6. With the exception of the Claymont site, the association purchased the sites and had the title to the land made in the name of the county or special district in which they are located. In all, fourteen sites for white schools have been acquired at a total cost of \$69,051. In addition, three options have been taken covering 29.6 acres at a cost of \$11,400. Twenty-one colored school sites have been acquired, comprising 72.9 acres and costing \$21,558, and 21 options have been taken, covering 51.8 acres and costing \$12,697.

The Auxiliary Association has a professional library for rural school teachers which is run in connection with the teacher training department of the Delaware Women's College and \$32,200 have been given to the high schools of the state to carry out the law relating to agriculture and domestic science. No provision had been made for the work by the 1919 legislature because the appropriation bills had been passed before the school law was adopted.

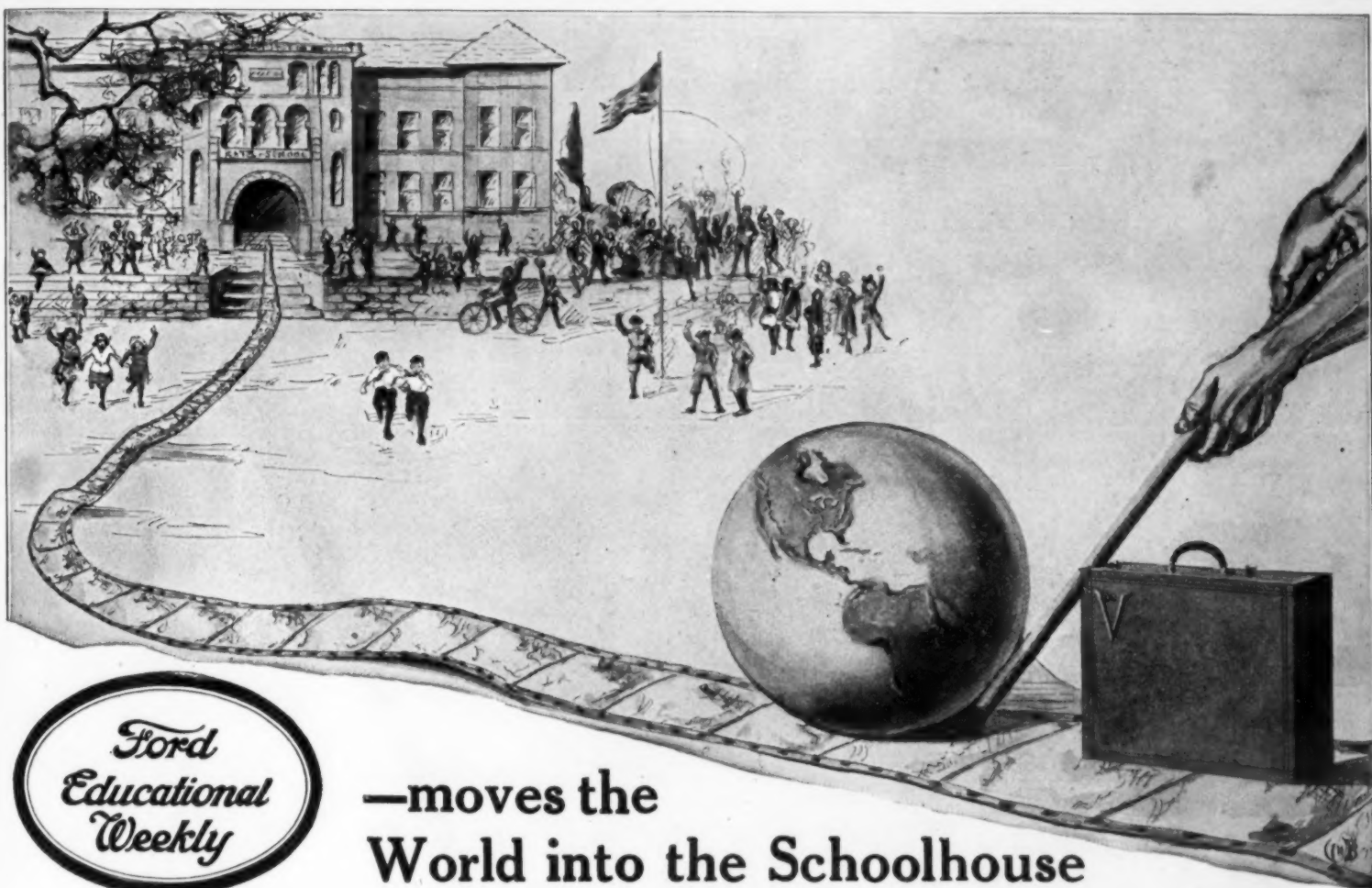
BUILDING AND FINANCE.

The Court of Civil Appeals has upheld the right of the city of Memphis to increase the school tax from fifty to sixty cents. The court held that there was nothing in the 1919 law to limit the school levy.

The school board of Louisville, Ky., in receiving bids on school supplies was met with an increase of ten per cent in cost. The board will spend \$70,000 on supplies, an increase of \$15,000 over last year.

Minneapolis, Minn. Business Superintendent George Womrath has recommended that the board increase the amount of insurance to cover the full value of the school property. Insurance now in force on the property covers only 46 per cent of the value. It is estimated that the total annual cost to the city for insurance will reach \$25,457 on a property valuation of \$10,615,450.

(Continued on Page 79)



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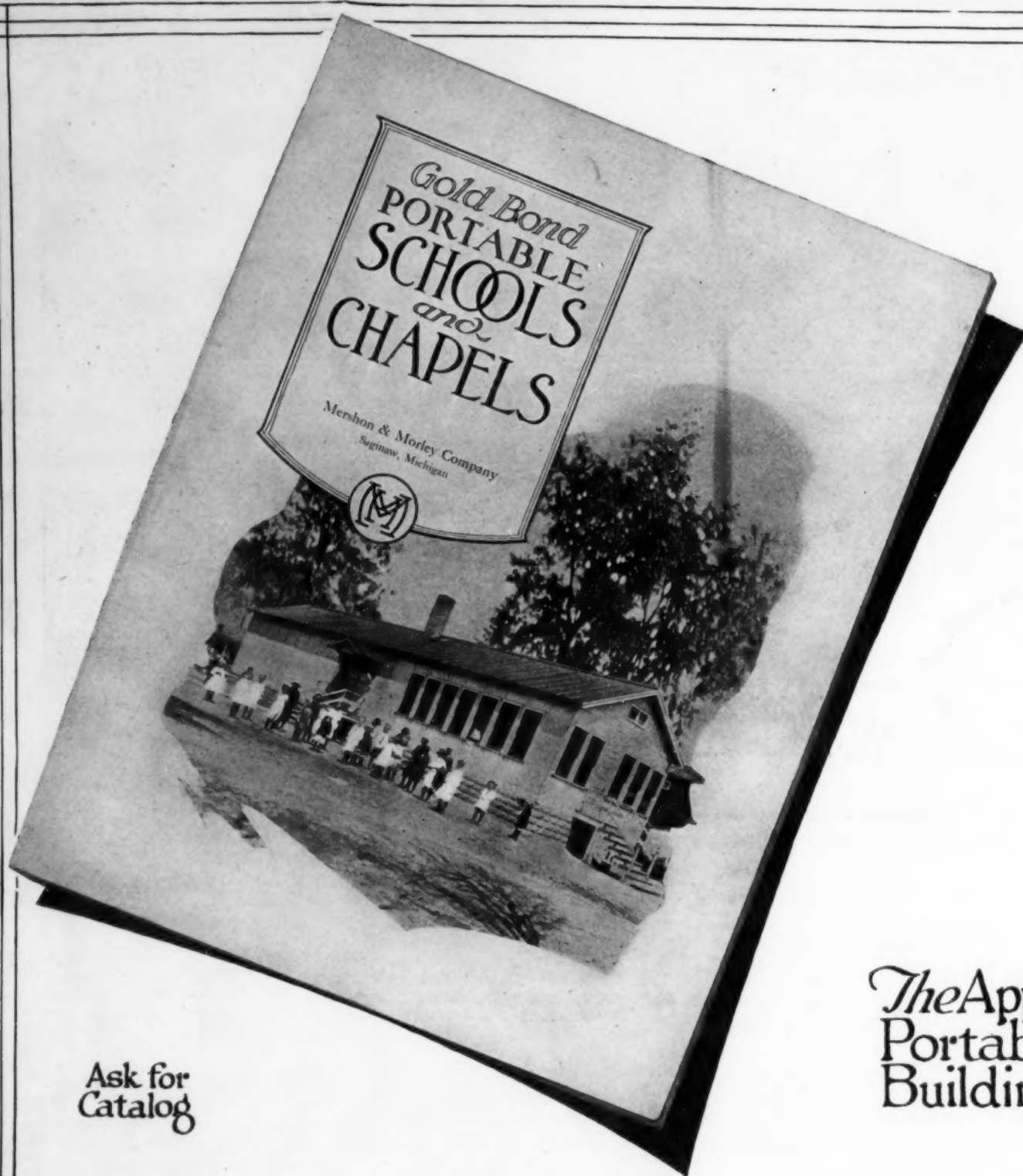
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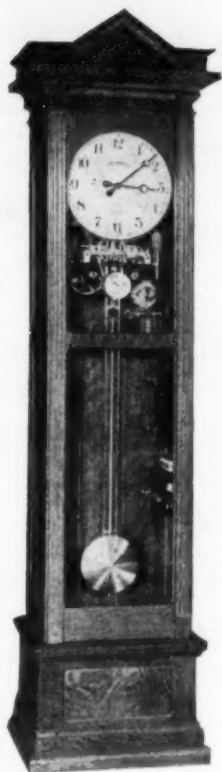
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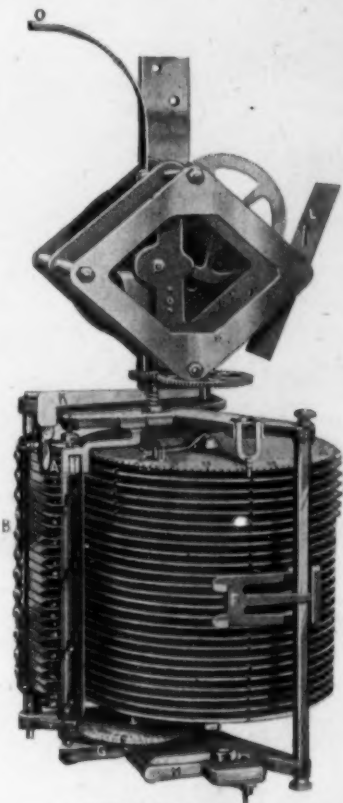
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(Continued from Page 76)

Easton, Pa. The Bureau of Buildings of the board has outlined a definite building program which will insure a certain percentage of improvement each year. The Bureau has prepared special plans and specifications in which are incorporated the needs of the various districts. The plans are the result of a survey and eliminate the necessity for a revision of the completed plans.

New York City, N. Y. Controller Craig's tardiness in taking title to sites required for school-houses is given as the reason for the delay in school building construction by the board of education. Altho the money was available in 1918 the controller failed to report on applications for sites for six schools turned over to him from ten to fourteen months ago. It is the fear of the school authorities that some of these sites have been turned to other purposes and are not now available for school buildings.

New Bedford, Mass. The claims of sub-contractors against the city, the Massachusetts Bonding and Insurance Company, the B. F. Smith Company, bankrupt and Robert Grieve, receiver, have been held valid in a report given out by Charles Mitchell, master in equity of the Supreme Court, at the hearing on the claims. The case had its start as a result of a suit brought by the McClintock-Marshall Company, one of the creditors in the equity division.

The proceedings grew out of the construction of the Ottiwell School, the general contract for which was awarded by the city to the B. F. Smith Company. The company furnished a bond of \$55,000 given by the Massachusetts Bonding Company. Before the building was completed, the contractors went into bankruptcy and the work was continued under the receivership of Mr. Grieve.

The court, in its decision, declared that the bond of the bonding company was in full force and effect so far as the complainants' rights were concerned, and that the claims of the sub-contractors are collectible from the city. In addition, the city must pay the B. F. Smith Company the amount of \$33,436.12, which repre-

sents payments withheld after the bankruptcy proceedings were begun.

Altoona, Pa. A bond issue for a million dollars has been carried. The proceeds will be devoted to the erection of a Junior High School to accommodate two thousand students. Supt. S. H. Layton acted as chairman of the campaign committee.

In a report on the finances of the Minneapolis schools, David F. Swenson, an expert, brings to light some interesting percentages of cost, as follows: Elementary 63 per cent; senior high 25; junior high 4.4; extension 26; health 2; and undistributed 3 per cent. Another table deals with the distribution of cost: Teachers 69 per cent; principals 3.8; physicians and nurses 1.5; clerical help 2.6; janitors 7; supplies 10; repairs 5; executives 1.1 per cent.

Oakland, Calif. The board of education has recently put into operation, a scheme of organization for groups of executives who are to carry out the details of the new building program for the schools. The schedule which was presented to the board in December, 1919, has developed as the work has grown and has undergone minor changes with the result that a more complete plan has been adopted.

Under the plan, the ultimate responsibility rests with the board of education, acting thru the president, Mr. Floyd R. Gray. Responsible to the president, are two important committees, the building committee, and the bond expenditure committee, a committee of responsible citizens.

Reporting to these committees is the Department of Information, and the committee on selection of sites. The latter is assisted by a land agent and a committee on appraisalment and purchase of sites.

Directly responsible also, to the building program committee and the bond expenditure committee, is the position of chief of construction. In close association with him are the estimators, the Auditing, Accounting and Payment Department, and the group represented by the Superintendent of Construction, the Clerk of Works and the Inspectors.

Directly responsible to the Chief of Construc-

tion is the supervising architect, Mr. C. W. Dickey. This department correlates with all the architects and the landscape architects on the one hand, and the engineers and sanitary experts on the other hand.

For the purpose of reference, the following groups may be called upon:

Departmental chiefs, school experts, architects, landscape architects, engineers and special experts.

The building program committee is composed of three members, with Dr. J. Loran Pease as head. The bond expenditure committee is made up of five members, with Mr. Frederick Kahn as chairman.

Offices for the accommodation of the Construction Department have been opened, with Mr. Marston Campbell as Chief of Construction.

A rigid inspection of the public schools of Los Angeles, Calif., to determine whether or not some of the school buildings are firetraps was the result of a conference which the Fire Commission recently held with Fire Chief Scott and a committee representing the Municipal League. Chief Scott appointed two members of his department to make a thoro survey of school buildings, and to compile a report concerning facilities for fire protection.

V. L. Benedict, member of the National Fire Protection Association's committee on schools, urges the board to include in its proposed school bond issue at least \$2,000,000 to be spent in providing adequate fire protection at the various frame buildings now used for school purposes. Mr. Benedict pointed out that many of the two-story frame structures are not provided with fire-escapes, that their heating systems, installed two years ago, would not pass the building inspector today, and that the stairways in many are so wide that children go down four abreast—a dangerous procedure, in case of fire.

Following thoro investigations, a report assuring parents that the lives of children in the schools are carefully guarded from fire dangers, was recently submitted to the board of directors of the Chamber of Commerce by the chamber committee on Safety and Fire Prevention.

(Concluded on Page 82)

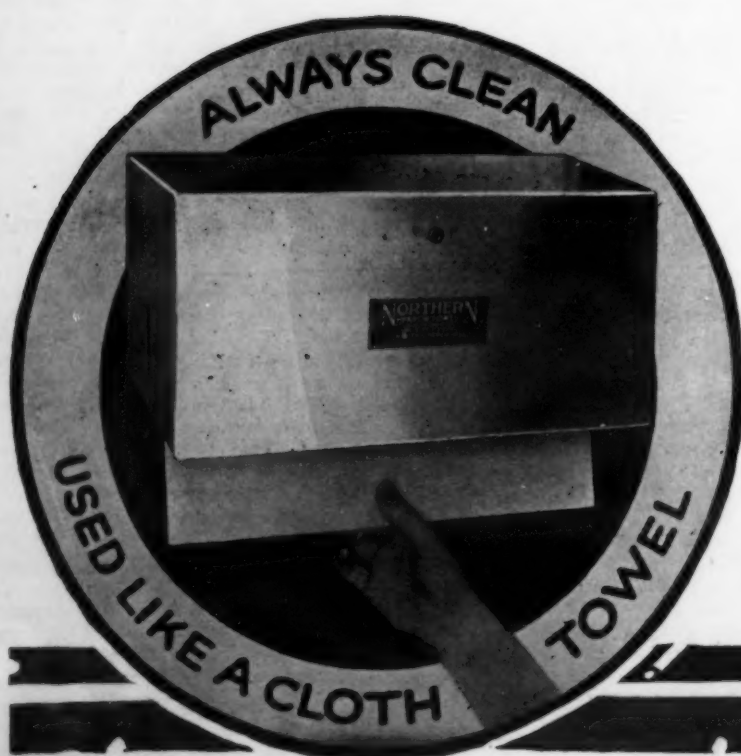


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REPRESENTATIVES IN ALL PRINCIPAL CITIES

(Concluded from Page 79)

Tests made in all the schools show that there are none in the city at present requiring more than 90 seconds to be emptied of pupils.

According to the statement of W. E. Record, business manager of the board of education, the board is carrying out as far as possible with the funds available, all precautionary measures urged by the fire department. He further states that nearly all school fires that have occurred in the past few years have been traced to incendiaries and have occurred before or after school hours. Only one fire in the last two years has occurred while children were in the building. In only one instance, a case where a furnace had become overheated, could the fire be traced to school equipment.

Construction of school buildings and the expense of improving and maintaining kindergartens, elementary and high schools in California for the past fiscal year cost the state \$33,930,652.50 according to statistics compiled by W. C. Wood, state superintendent of public instruction.

Expenditures for 1918-1919 were \$1,049,286.46 greater than the previous year, or 3.2 per cent larger than in any year previous to 1918. The total expense for maintenance of all the schools shows an increase of 7.5 per cent over the previous year. The expense for salaries shows an increase of 7.7 per cent, while the expense for buildings and other permanent improvements shows a decrease of 20 per cent.

The total average daily attendance in all three branches of the common school system was 456,809 a gain of 72,172 over the year previous. This is an increase of six per cent.

In discussing the significance of the figures, Mr. Wood pointed out that whereas the total expense for the schools had increased only 3.2 per cent, the average daily attendance had increased six per cent. "It would seem," he said, "that education is one of the cheapest commodities in California."

A bill has been passed by the Washington state

legislature providing for school support upon what is referred to locally as the 20-10 plan. It requires that the state shall annually, at the time of levying taxes, levy a tax sufficient to produce a sum which, when added to the money derived from interest and other income, will equal \$20 for each child of school age, residing in the state, as shown by the last reports of the several county superintendents. The respective counties are required to levy a tax of \$10 for each child. The new law means \$3,500,000 additional funds for 1921.

In Indiana 3,990 one-room schools have passed out of existence since 1890 and 1,002 consolidated school buildings have come into their places. The total number of one-room buildings 8,853 has been reduced 45 per cent or to 4,880.

HYGIENE AND SANITATION.

Terre Haute, Ind. Health stations were conducted in each of the grade schools in connection with the observance of health week. The work was done under the auspices of the parent-teacher associations and included the examination of all children under 8 years of age.

Fort Worth, Tex. The school nurses' staff has been increased from four to six nurses.

A traveling dental clinic has been equipped and placed in operation in Shelby County, Tenn. The clinic which has begun its tour thru the county, is owned and operated by the Shelby County Tuberculosis Society.

The work of the clinic does not interfere with the private practice of dentists but is designed rather to supplement their work in the way of examination, diagnosis, etc. The necessity of observing the simple rules of oral hygiene, and the great part which care or neglect of the teeth plays in health, are emphasized.

The Vermont Board of Health has reported that 128 towns, or 52 per cent, have voted to introduce medical inspection this year. A year ago there were only a dozen towns possessing medical inspection systems.

Holyoke, Mass. A survey of the city has been made by Dr. E. F. Sullivan preparatory to the establishment of a dental clinic in the schools. The clinic will be conducted under the direction of a dentist to be named by the board of education.

Children attending the schools of Berlin, in Germany, are weighed and measured at the beginning of each semiannual term. A special school is to be established for those unable to follow the regular instruction because of deficient eyesight.

Oklahoma City, Okla. The board has appropriated \$10,000 for the establishment of open air schools. It is proposed to remodel the present frame annex buildings into open air structures.

Supt. John P. Garber of Philadelphia has recommended the immediate enlargement of medical inspection and attendance officers' forces in order to carry out the state law relating to the medical inspection of school children. It is estimated that fourteen inspectors, three supervisors and seventeen nurses will be needed to supplement the present staff.

A controversy over compulsory vaccination arose recently in Hamilton County, Tenn., when the county physician failed to carry out the rule governing the vaccination of rural school children. The county physician refused to go into the rural districts and the children either attended school in disregard of the rule or used it as an excuse for truancy.

Cleveland, O. The school medical inspector has recommended the employment of five additional school physicians and seven nurses to make possible more complete medical examinations of children in the first and fifth grades.

Three additional dental clinics are proposed in as many schools, to more properly and adequately care for the teeth of children. Six schools formerly operated on half time will be placed on full time.

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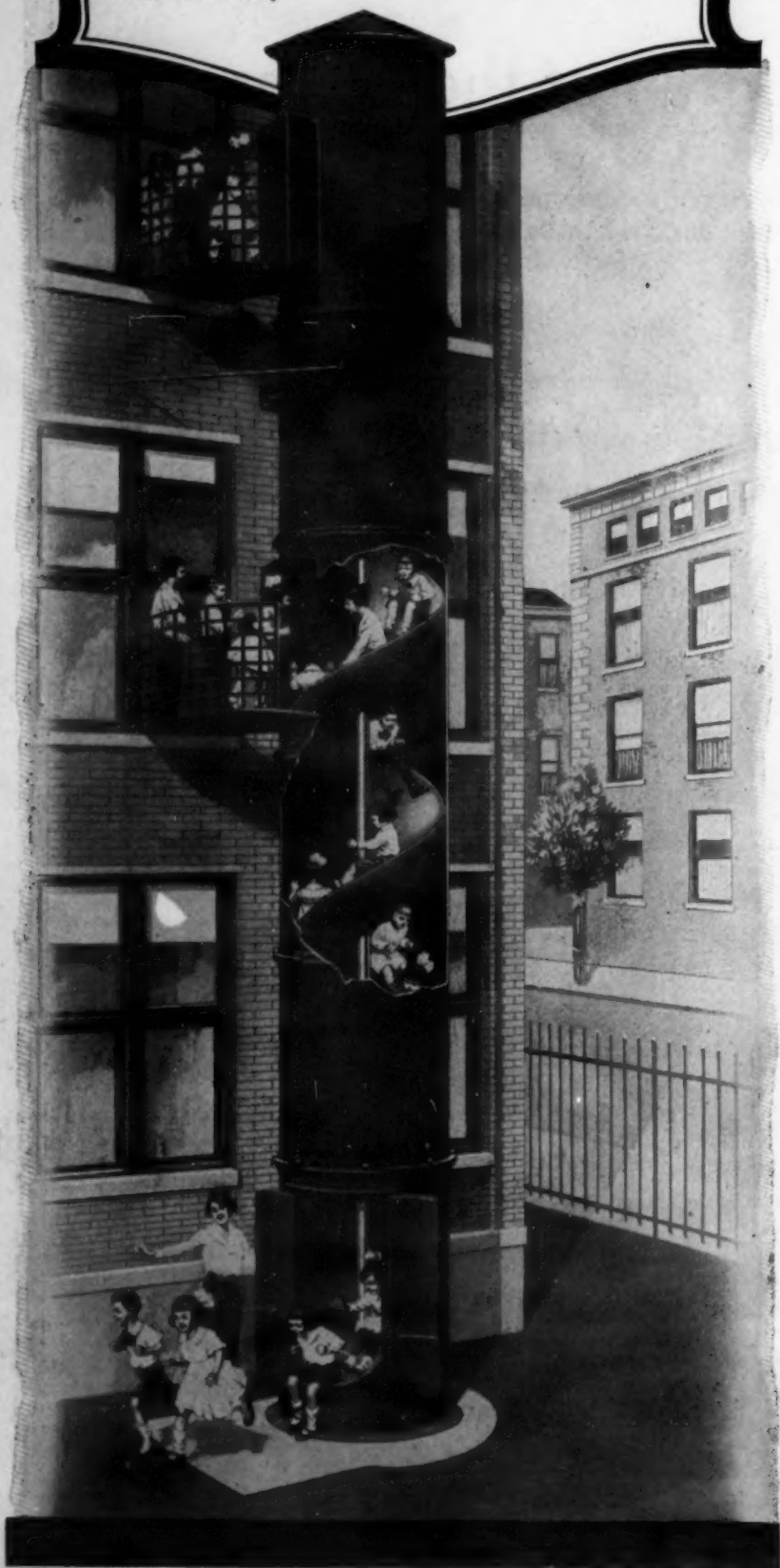
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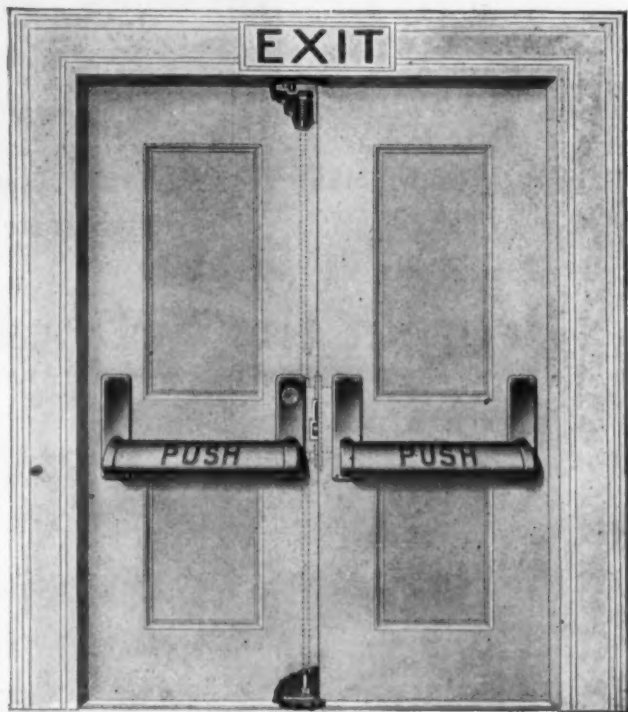
The fire in the school house gained rapidly. The time was all too short to march the small children down the *old fashioned* fire escape to safety. They immediately became panic stricken—pandemonium reigned. The toll of death was tremendous. Who was responsible?

In the school board's safe were found plans and specification for Kirker-Bender Fire Escapes for that very building which had been submitted six months before. Truly a costly delay. Kirker-Bender Fire Escapes would have emptied the entire building in about a minute. Safeguard the lives of those who trust themselves to you. Write Dow Wire and Iron Works, Incorporated, Louisville, Kentucky.



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Members of school boards and other officials on whom the responsibility rests should make full provision for protection to life in case of panic by the use of this safety device.



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as illustrated above, are attractive in appearance, strong in construction and quick in action. The construction is such that in operating the push bar the hands or arms cannot be caught between the bar and the door.

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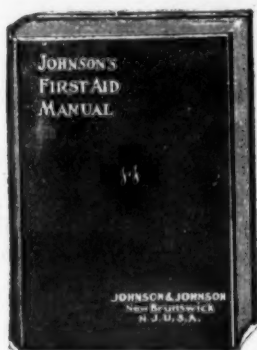
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PERSONAL NEWS OF SUPERINTENDENTS.

Mr. R. A. Dean of Lovington, N. Mex., has been elected superintendent of schools at Mineral Wells, Tex.

Mr. E. K. Matlack, supervising principal in Newfield, N. J., has resigned to accept the superintendency at Paulsboro, N. J.

An agitation to remove J. E. Collins, superintendent at Lima, Ohio, has found its way into the public press. A vote of the teachers was taken with the result that 78 favor his retention, 28 his removal.

The school board of Chillicothe, Ohio, has been asked to retain Superintendent N. H. Chaney. Petitions signed by 6,501 citizens and 526 teachers have been submitted.

The school board at Newport News, Va., has asked the state board of education to remove D. A. Dutrow, superintendent of schools. The board charges that the superintendent had assumed a hostile and dictatorial attitude towards the board. Mr. Dutrow makes a vigorous denial of the charges.

Supt. A. B. Johnson of Orlando, Fla., has been reelected for the next school year.

The school board of St. Louis, Mo., is in favor of increasing Supt. John W. Withers' salary from \$8,000 to \$12,000.

The late Dr. Maxwell, former school superintendent of Greater New York, left an estate valued at \$60,000. His home at Flushing goes to his son, Wm. H. Maxwell, Jr., also the royalties on his books. His daughter, Mrs. Elaine M. Mackin, will receive certain real estate, stocks and bonds. A sister of Dr. Maxwell, Mrs. Anna M. Browne of Glenalta, Londonderry, Ireland, will receive \$500 a year.

Mr. C. C. Collins of Abilene, Tex., has been elected superintendent of schools at Bentonville, Ark.

Mr. J. W. Foreman of Vincennes, Ind., has been elected superintendent of schools at Goshen. He succeeds James W. Wilkinson, who resigned.

Miss Mildred Rowe of Rochester, Minn., has been appointed assistant superintendent of schools at Carlinville, Ill.

Mr. Albert B. Meredith who recently became Commissioner of Education for the state of Con-

necticut, will receive a salary of \$9,000 a year. The new official is the highest paid administrative official in the state.

Mr. D. E. Batcheller has resigned from the superintendency at Olean, N. Y.

Mr. Frank W. Simmonds of Lewiston, Ida., has been elected superintendent of schools at Everett, Wash.

Mr. L. W. Bills of Waterford, N. Y., has been elected superintendent of schools at Herkimer.

Mr. Samuel F. Bemis, associate professor of history at Colorado College, has accepted a similar position at Whitman College, Walla Walla, Wash.

Supt. Claud F. Brown of Charles City, Ia., has been reelected at a salary of \$3,200.

Mr. W. T. Doggett has been elected superintendent of schools at Denton, Tex., to succeed J. W. Beatty.

Supt. J. H. Fassett of Nashua, N. H., has announced his resignation.

Mr. Charles W. Walter has been elected superintendent of schools at Blackstone, Mass.

Mr. L. R. Trezona has been elected superintendent of the Tracy Consolidated School at Tracy, Ia.

Mr. Fred Bishop of Shawano, Wis., has been elected superintendent of schools at Two Rivers. Supt. C. G. Persons of Taunton, Mass., has been reelected for the next year at a salary of \$4,300.

The salary of Supt. F. L. Lowman of the Hume Township schools at Hume, Ill., has been raised to \$2,700.

James H. Gray of Poplar Bluff, Mo., has been elected superintendent of schools at Bloomfield.

Supt. W. F. Dykes has been reelected at Atlanta, Ga.

J. T. Muir has been elected superintendent of schools of LaGrange, Ill.

Supt. J. E. Collins has been reelected at Lima, O., for the next five years, at a salary of \$5,000 per annum.

Supt. J. C. Skaggs has been reelected at Newton Falls, O.

Supt. H. H. Edmunds has just been reelected at Clinton, Iowa, for his fourteenth year as the chief executive of the schools. His salary during the coming year will be \$4,000.

Mr. E. W. Bell has been elected superintendent of schools at Crestline, O.

Mr. Ralph E. Smith of Indianola, Ia., has been elected superintendent of schools at New Virginia.

Supt. R. C. Smith of Peoria, Ill., has been reelected at a salary of \$3,000.

Supt. Burrus Beard has been reelected at Lorimor, Ia., at a salary of \$2,500.

Mr. L. G. Donaldson has been elected superintendent of schools at Amory, Miss., to succeed J. E. Gibson, resigned.

Supt. E. S. Farrington of Lancaster, Tex., has resigned to enter private business.

Supt. N. W. Frasure of Bellville, O., has been reelected.

Mr. C. O. Taylor of North Lewisburg, O., has been elected superintendent of schools at Bradford, at a salary of \$2,200.

Mr. John Allen of Broughton, Ill., has been elected superintendent of schools at Eldorado.

Mr. H. M. Goddard, formerly state high school inspector of Wisconsin, has been elected superintendent of schools at Eau Claire.

Supt. L. A. Schafer of O'Fallon, Ill., has been reelected for the next year.

Supt. J. K. Stableton of Bloomington, Ill., has resigned.

R. E. L. Adams of Seguin, Tex., has been elected superintendent of schools at Yoakum.

Supt. Harry McGuire of Kiowa, Kans., has been reelected for the next year at a salary of \$3,000.

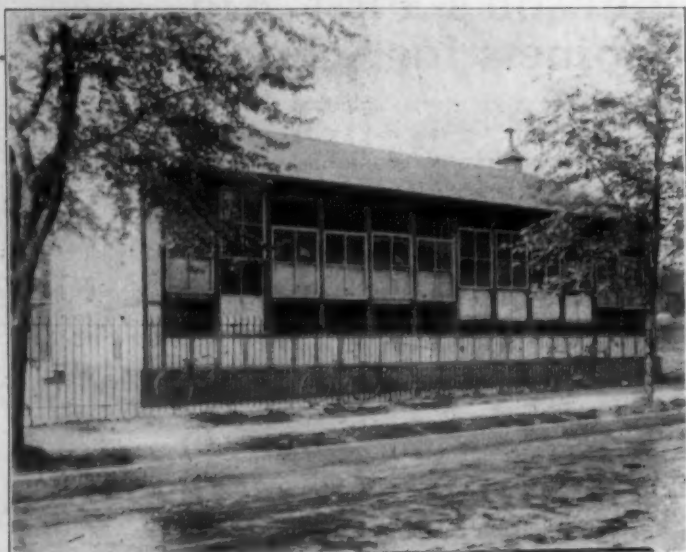
Supt. H. L. Sullivan of Van Wert, O., has been reelected for a two-year term, at a salary of \$3,200 for the first year and \$3,300 the next.

Supt. C. J. Byrne of Ottawa, Ill., is the defendant in a suit for \$10,000 damages brought by Carl Johnson of Chicago. Mr. Johnson was severely injured in Chicago last summer, when he was struck by an automobile driven by Mr. Byrne. The former suffered a broken limb and internal injuries which have prevented him from doing strenuous work since the accident.

Mr. J. B. Taylor, formerly superintendent of the vocational training schools at Camp Travis, Tex., has been appointed superintendent of the Brownsville, Tex., schools.

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Miss Eva B. Shuman has been appointed superintendent of schools for Jefferson County, Neb., to succeed Mr. Henry Abrams. Miss Shuman was superintendent of the Fairbury, Neb., schools for the past two years.

Supt. H. J. Blue was reelected at Carlinville, Ill., schools. He will receive a salary of \$3,000.

Mr. Owen Jones was appointed superintendent of the Rosedale, O., school for the coming year.

Dr. H. A. Hartman, for the past seven years superintendent of the Marion, O., city schools has resigned.

Mr. H. W. Hinkle was elected superintendent of the Paris, Ill., schools.

Supt. W. W. Thomas was reelected head of the Springfield, Mo., public schools.

Armand J. Gerson, principal of the William Penn High School, Philadelphia, Pa., was elected to fill the long-vacant position of associate superintendent of schools.

Miss Catherine T. Bryce, assistant superintendent of the Cleveland public schools, has been appointed to an assistant professorship at Yale University. In her new position, Miss Bryce will teach courses in elementary supervision and the language arts.

Supt. S. J. Shomaker of Murphysboro, Ill., has been reelected at a salary of \$2,400.

D. E. Dean of Nevada, Tex., has been elected superintendent of schools at Grand Saline, at a salary of \$2,000 per year.

F. K. Watson of Plattsburgh, N. Y., has been elected superintendent of schools at Danbury, Conn., at a salary of \$5,000.

Paul Van Ripper has been elected superintendent of schools at Lebanon, Ind.

Supt. F. M. Bray of Tomah, Wis., has been elected principal of the high school at Eau Claire.

Mr. S. A. Lahr has been appointed superintendent of schools at Dunlap, Ia., at a salary of \$3,000 per year.

Prof. W. O. Hopper, for the past twelve years Superintendent of the Mt. Sterling, Ky., public schools, has resigned his position. During his stay in the city he saw the schools grow from eight to sixteen teachers under his leadership.



CARLOS M. COLE, Denver, Colorado
Died June, 6, 1920.

DENVER'S SUPERINTENDENT DEAD.

Carlos Merton Cole, who has served as Superintendent of Schools at Denver since 1915, died suddenly on June 6th following an operation for appendicitis.

Mr. Cole was born near Durand, Ill., in 1872. He was educated in the schools of Iowa, graduating from Grinnell College in 1895. He also graduated from the University of Denver in 1916. Before going to Denver he was superintendent at Colorado Springs.

He was a modern schoolmaster, energetic and progressive, and thoroughly devoted to his profession. He enjoyed the confidence of his associates and the public.

S. E. Lahr of Huntington, Ind., has been elected superintendent of schools at Dunlap, Ia.

Supt. John P. Garber of Philadelphia, Pa., has announced his resignation, to become effective in October next. Supt. Garber was elected in 1915, to succeed the late Wm. C. Jacobs.

Mr. G. O. Banting, of Chippewa Falls, Wis., has been elected superintendent of schools at Waukesha, Wis., to succeed J. R. Williams.

Supt. O. E. Fleming of Ballinger, Tex., has been reelected at a salary of \$2,400.

Supt. Lester M. List of Harrisonville, Mo., has announced his resignation.

Mr. C. W. Brown of Lake City, Minn., has been elected superintendent of schools at Albert Lea, to succeed C. C. Baker, resigned.

Supt. Theodore Saam has been reelected at Council Bluffs, Ia., for a three-year term.

Mr. P. J. Zimmers of Manitowoc, Wis., has been elected superintendent of schools at Boise City, Idaho. Mr. Zimmers enters upon his new work in July.

Supt. Joseph V. Vorhees of Winona, Minn., has resigned to accept the office of northwest manager for the Clark Teachers' Agency.

Supt. E. T. Duffield of Ironwood, Mich., has been reelected at an increased salary.

Mr. Wm. T. Darling of Two Rivers, Wis., has been elected superintendent of schools at Eau Claire, Wis., to succeed W. A. Clark.

Supt. W. C. Reavis of Alton, Ill., has been reelected at a salary of \$5,000.

Supt. Harlan A. Davis of Port Huron, Mich., has been reelected at a salary of \$4,000.

Prof. Dudley T. Rogers, a well-known educator of Arkansas, died April 4th at Jonesboro. Prof. Rogers was city superintendent for 21 years, and for the last six years had been instructor in the school of agriculture.

Mr. E. D. Dean of Weiser, Ida., has accepted the superintendency at Edgemont, S. D., at a salary of \$3,000.

Lima, O. J. E. Collins was reelected superintendent. His salary was increased to \$5,000.

Miss Adelaide Steele Baylor has the Democratic endorsement in her candidacy for State Superintendent of Public Instruction.

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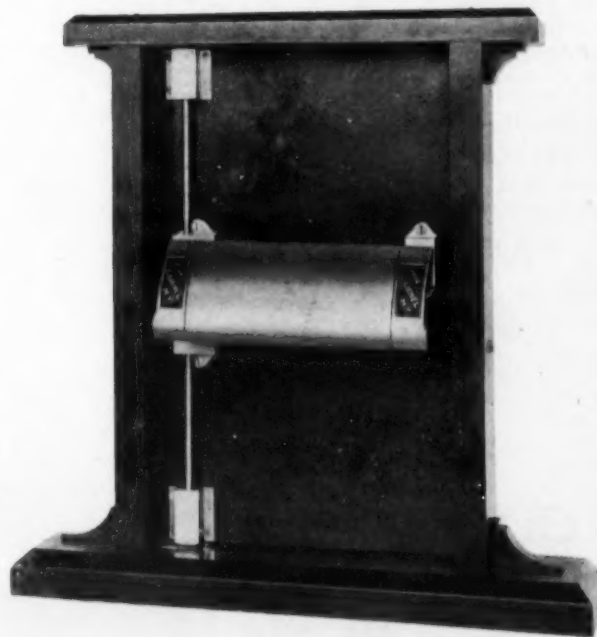
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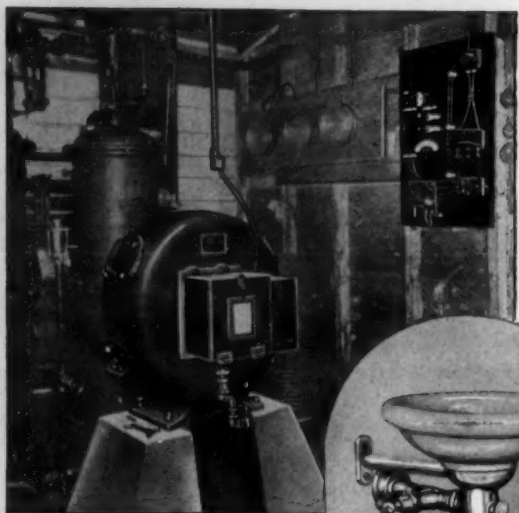
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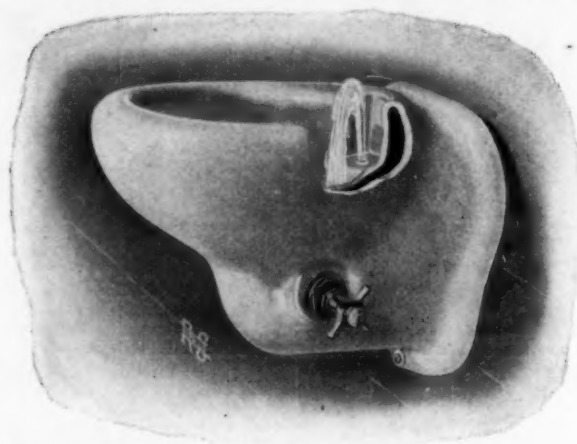
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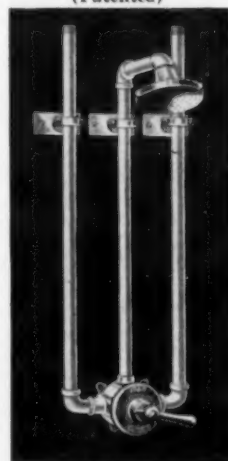
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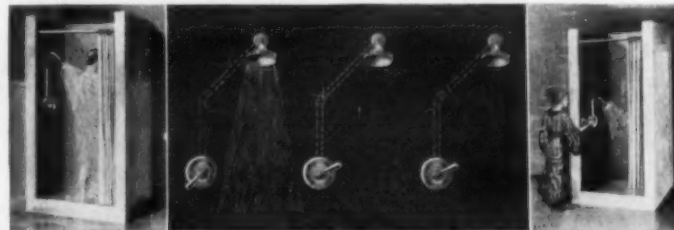
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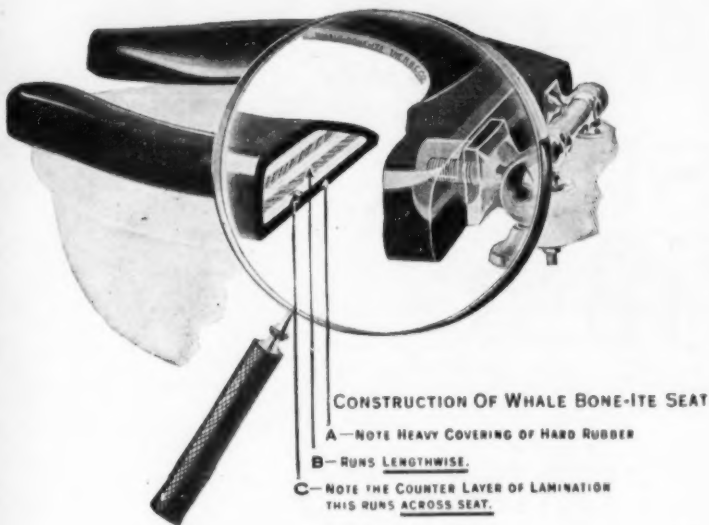
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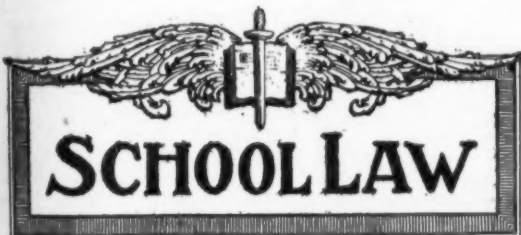
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School District Property.

A letter written by the trustee of a school district, asking a landowner how much he would take for one acre of land at a certain corner, and letters stating \$25 to be the price of an acre of land for the schoolhouse, and that \$15 was received as part payment for the land for the schoolhouse, were insufficient to show a sale or an agreement to sell the land in fee in view of custom of moving school buildings from place to place in the district.—*San Antonio Union School Dist. of Monterey County v. Huston*, 187 P. 95, Cal. App.

Under the South Dakota laws of 1917, c. 221, relative to the removal of schoolhouses in a school district having but one schoolhouse, a majority of all the voters expressing a preference on the subject was sufficient to authorize removal of the schoolhouse from a point without the geographical center of the district.—*Luze v. Bruening*, 176 N. W. 41, S. D.

In view of Burns's annotated statutes of 1914, §§ 9590, 9595, 9601, a contract for alteration of a school building was void where no record was made of any meeting of the trustee and advisory board of the township, and no appropriation was made at the time of the creation of the obligation.—*Railroad School Tp. v. First State Bank*, 126 N. E. 342, Ind. App.

Where the term of office of members of an advisory board expired and their successors qualified, an act of the old board, after the qualification of the new members, in declaring an emergency and in joining with a school trustee in the execution of a note, was wholly without authority and void.—*Railroad School Tp. v. First State Bank*, 126 N. E. 342, Ind. App.

In an action by materialman wherein it was sought to hold school commissioners individ-

ually liable for materials furnished a contractor in the construction of a school building, on the ground that the bond executed by the contractor was not drawn up so as to comply with the Tennessee laws of 1899, c. 182, evidence is *Held* not to show that there was any agreement or any understanding between the commissioners and the contractor and surety to the effect that the bond was to cover labor and materials furnished as provided by such act.—*Tennessee Supply Co. v. Bina Young & Son*, 218 S. W. 225, Tenn.

A bond executed by a contractor constructing a school building is *Held* not to comply with the Tennessee laws of 1899, c. 182, an act protecting laborers and furnishers of material on public works.—*Tennessee Supply Co. v. Bina Young & Son*, 218 S. W. 225, Tenn.

A bond given by a contractor on a school building, conditioned to provide all labor and material necessary for the construction of the building, did not inure to the benefit of those furnishing the contractor with labor or material.—*Tennessee Supply Co. v. Bina Young & Son*, 218 S. W. 225, Tenn.

A surety on the bond of a contractor constructing a school building was not liable to the school commissioners, who paid a creditor of the contractor when they were under no obligation to do so.—*Tennessee Supply Co. v. Bina Young & Son*, 218 S. W. 225, Tenn.

One contracting to alter a school building and a bank discounting a note given by a trustee and advisory board were bound to take notice that the trustee and advisory board were public officers, creatures of the statute, and that they had only such powers as were conferred upon them by statute, and that they must exercise such powers only in the manner provided by statute.—*Railroad School Tp. v. First State Bank*, 126 N. E. 342, Ind. App.

A contract and bond for the construction of a school building is *Held* to render the contractor and surety liable for the upkeep of the building for a period of one year from and after its completion, as well as for any defective workmanship or material used in its construction.—*Tennessee Supply Co. v. Bina Young & Son*, 218 S. W. 225, Tenn.

Furnishers of materials on a public school building in the course of the construction by

a contractor have no lien on the property, and the school district is not liable to one who furnishes material to the contractor.—*Tennessee Supply Co. v. Bina Young & Son*, 218 S. W. 225, Tenn.

In an action wherein school commissioners sought damages from a contractor and his surety due to defective workmanship and material used in the construction of a school building, a finding by the chancellor of damages in the sum of \$4,171.92 is *Held* proper under the evidence.—*Tennessee Supply Co. v. Bina Young & Son*, 218 S. W. 225, Tenn.

Actions for damages for personal injuries will not lie against school districts; such districts being corporations with limited powers which act merely on behalf of the state in discharging the duty of educating the children of school age in the public schools created by the general laws.—*Woodcock v. Board of Education of Salt Lake City*, 187 P. 181, Utah.

School District Taxation.

Where bonds were issued by the directors of a school district organized under the Arkansas acts of 1909, No. 321, without authority of electors as required by statute, the act of the directors was ultra vires, and the bonds, even in the hands of a bona fide holder for value, were void; for all persons dealing with public officials must take notice of the restrictions on their powers.—*Rural Special School Dist. No. 30 v. City of Pine Bluff*, 218 S. W. 661, Ark.

Contests of election are authorized by statute only as between nominees claiming election to an office, and are not provided as such respecting elections about measures submitted to the people, as an issuance of bonds by a school district.—*Pullen v. School Dist. No. 3, Multnomah County*, 187 P. 624, Ore.

School District Claims.

Compensation awarded a school teacher under the Workmen's Compensation Act is a liquidated claim partaking of the nature of a judgment against the school district, and the board has no discretion respecting its allowance or payment, and hence it need not be verified or audited.—*Woodcock v. Board of Education of Salt Lake City*, 187 P. 181, Utah.

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Pupils.

The offense of failure to cause child to attend school is committed, if at all, in the district, town and county in which the parent and child reside while the child is absent from school; it being necessary that such place of residence be shown to confer jurisdiction upon the trial court, under the New York Education law, §§ 567, 621-624, and the New York Code of Criminal Proceedings, § 151.—People v. Saddlemire, 180 N. Y. S. 257, N. Y. Co. Ct.

In the prosecution of a parent for failure to cause a child to attend school, under the New York Education Law, §§ 621-624, it will not be presumed that, because a child attended school in certain district, he was a resident of such district, in view of the New York Education Law, § 567.—People v. Saddlemire, 180 N. Y. S. 257, N. Y. Co. Ct.

The Indiana Supreme Court, in reversing a decision of the Lake County Superior Court, has decided that school trustees need not complete the purchase of property for which they have brought condemnation proceedings, if they believe the price set is too high. The decision was given in the case involving the school trustees of the town of Whiting, who sought to dismiss condemnation proceedings which they had brought to obtain a piece of property. The lower court had held that since the trustees had made some progress in the proceedings they were bound to complete the purchase.

Governor Smith of New York signed the Lockwood-Donohue bill and Mayor Hylan affixed his signature to the Downing bill, authorizing the issue of certificates of indebtedness to pay the increases from August 1 when the Lockwood law takes effect, until January 1, when the budget will meet then all the increases, together with the allowance from the State.

AGE-GRADE PROGRESS IN SIOUX CITY.

The superintendent's office of the Sioux City, Ia., schools has conducted investigations of age-grade progress from year to year. A recent report which has just been issued, shows that the schools have made a gain of 7.6 per cent in efficiency during the past year. Retardation for the entire school system amounted to only eighteen per cent.

The report also shows that accelerations have increased from 4.4 per cent to eight per cent, or a gain of 3.6 per cent. Retardations decreased from 22 per cent last year to eighteen per cent this year, or a gain of four per cent. This makes the total gain in the school system 7.6 per cent.

It is estimated that the gain of 7.6 has come about because of the intelligent study which the principals and teachers have made of the problems during the past year.

The report shows that, comparing the results with Terman's "measurement of intelligence", it is assumed that since the teaching budget is \$365,000, there has been saved in teaching expenses alone 7.6 per cent of that, or \$27,740. This represents only a part of the saving since it means a year at least saved to 7.6 per cent of the pupils. It means an increase in the building capacity of 7.6 per cent of the total enrollment.

A later report will consider the problem of sifting the cases of possible accelerates, studying them carefully and where possible, to consider placing the child a half year or a year above the grade in which he is at the present time. It is held that oftentimes the child who most needs accelerating is the one who is not doing brilliant work and who feels no special need to use the ability which he possesses. He is satisfied to be inactive and devotes his surplus energy to mischief making which might better be given to useful lines of advanced work.

OHIO SCHEDULES.

At a meeting of city and county school superintendents of Ohio, held under the direction of State Supt. V. M. Riegel, minimum salary schedules for teachers in urban and rural schools were established as possible guides for boards of education in fixing salaries for the next year. The schedule for cities was as follows:

| | Cities up to 25,000 | Cities from 25,000-75,000 | Cities above 75,000 |
|-------------|------------------------|------------------------------|------------------------|
| Elementary | \$1,000-\$1,500 | \$1,100-\$1,700 | \$1,200-\$2,150 |
| Junior High | \$1,100-\$1,800 | \$1,200-\$1,800 | \$1,350-\$2,400 |
| Senior High | \$1,250-\$2,000 | \$1,350-\$2,000 | \$1,500-\$2,700 |

The schedule provides for a normal annual increase of ten per cent.

The superintendents of rural schools adopted the following minimum:

| Experi- ence | Training | | | | |
|-----------------|--------------------|--------|--------|---------|---------|
| | Less than 1 yr. | 1 yr. | 2 yrs. | 3 yrs. | 4 yrs. |
| 1 year ... | \$800 | \$ 900 | \$ 990 | \$1,080 | \$1,170 |
| 1 year ... | 800 | 990 | 1,080 | 1,170 | 1,260 |
| 2 years .. | 800 | 1,080 | 1,170 | 1,260 | 1,350 |
| 3 years .. | 800 | 1,170 | 1,260 | 1,350 | 1,440 |

A NEAT SCHOOLROOM.

A writer in the *Alaska School Bulletin* notes the following outstanding points which he had noted in one of the schools and which he asks teachers to observe when closing their schools for the present year:

1. The blackboard, chalk tray, and erasers were clean and free from dust.
2. All books and other material, including paper, short pencils, etc., were removed from the pupils' desks.
3. These books were stacked in neat piles by subjects either in the book case or in a box which had been converted into a book case for the occasion.
4. All general school supplies, such as tablets, chalk, pencils, drawing paper, water colors, etc., were arranged neatly on the shelves.
5. The top of the teacher's desk had been cleared. An examination of the drawers of the desk revealed the following: In the most accessible drawer were found the courses of study, the register of attendance, a duplicate copy of the teacher's annual report to the Commissioner of Education, a file of unused report blanks, a file of circular letters received from the office of the Commissioner of Education, the rules and regulations governing the conduct of the school, and a copy of the program of recitations for the year.
6. In other parts of the desk were complete samples of the written work of the pupils in the various subjects, a general statement as to the work completed by the various classes with especial mention of work undertaken that was not suggested in the course of study or outlined in the textbooks, samples of cardboard construction work, paper cutting, water color and crayon work, etc.

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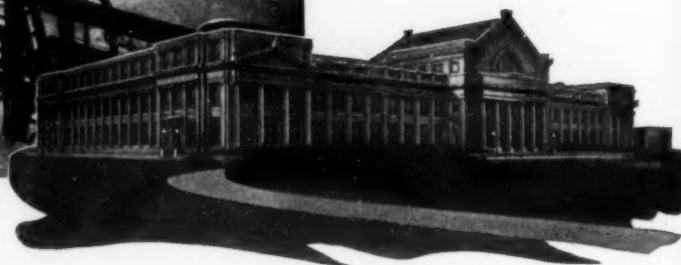
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Lunch Room, Nicholas Senn High School, Chicago



Why the School Lunch Room?

The objective of the school is to fit the pupil for the business of living. No child that is undernourished is properly fitted to take his place in modern society. Cold lunches at noontime do not furnish the proper nutrition for the afternoon session. Then, too, all children require food for growing. The fact that the majority of school children are improperly fed is borne out by the marked improvement in the scholarship in schools that have installed lunch rooms.

The school lunch room does not necessarily entail a large investment, and can be made to pay all expenses and still furnish hot dishes to students at a remarkably low price. Often a five cent bowl of soup is an adequate supplement to the lunch carried by the pupil. In many schools the domestic science classes prepare part of dishes for the lunch room. Here it is possible to make a saving of the cost of the materials for the domestic science rooms. Courses in this manner are rendered much more practical as the students are not forced to work with abnormally small quantities because of the high cost of materials.

We invite consultation in the planning of school lunch rooms and domestic science departments. This will incur no obligation on your part. Our service includes the designing, complete outfitting and installation of these establishments. Many of the finest school cafeterias in the country are the products of our service organization.

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| | |
|------------------------------|--------------------|
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| Mississippi Woman's College | Hattiesburg, Miss. |
| Moline High School | Moline, Ill. |
| Harrisburg High School | Harrisburg, Pa. |
| Nicholas Senn High School | Chicago, Ill. |
| Valparaiso University | Valparaiso, Ind. |
| Nebraska State Normal School | Peru, Neb. |
| Sam Houston Normal Institute | Huntsville, Texas |
| South Dakota State College | Brookings, S. D. |
| State Teachers' College | Greeley, Colo. |
| Millsap's College | Jackson, Miss. |
| Academy High School | Erie, Pa. |
| Sapulpa High School | Sapulpa, Okla. |
| Iowa State College | Amos, Iowa |
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| Lake View High School | Chicago, Ill. |

We have prepared several books and bulletins which will interest you. These will be sent to you at your request. To avoid error kindly mention the books by number.

Y10—Equipment for Cafeterias, Lunch Rooms, Restaurants and Dining Rooms.

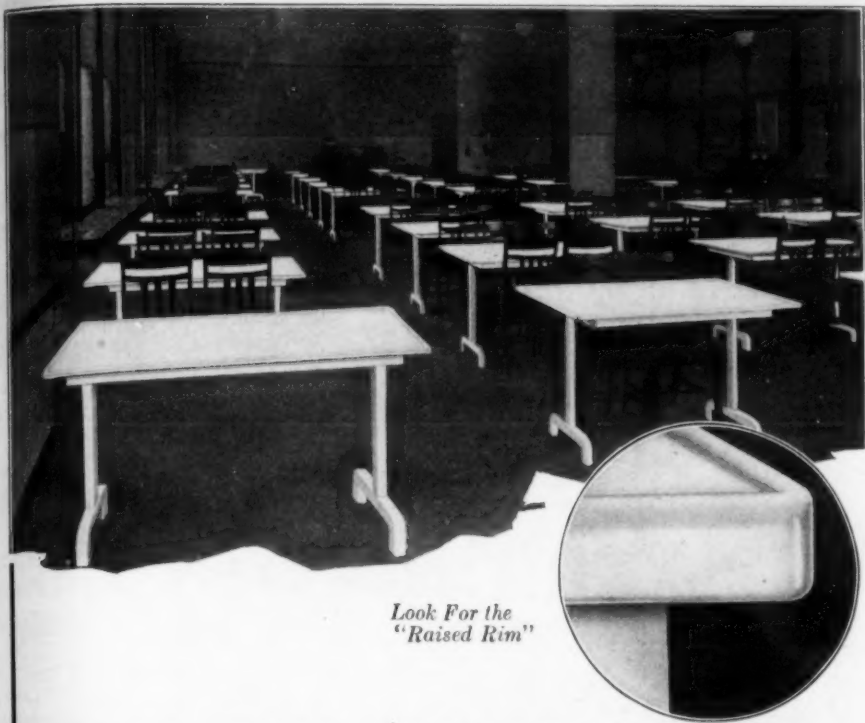
Y151—Feeding the School Child.

Y152—Practical Domestic Science in City and Country Schools.

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Are you running an up-to-date school? Do your pupils have to carry cold lunches that become uninviting by lunch time? Give them a chance, by providing hot, wholesome lunches that are full of warmth and energy. Install a sanitary lunchroom where they can secure a good meal at a minimum cost. **Sani-Onyx Tables** with **Sani-Metal Bases** will meet all your requirements.

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Sani-Onyx Table Tops have a "Raised Rim" which prevents chipping and keeps dishes from sliding to the floor. No table cloths needed. Think of the saving in laundry bills alone. Simply wipe the surface with a damp cloth and they will always be clean and inviting. **Sani-Metal Bases** are made of fine grained cast iron, heavily coated with porcelain enamel. No projections or crevices for dirt to collect. Look better than the ordinary varnished kind and will last a lifetime.

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modate pupils. The space is ft. by ft.

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TEACHERS AND SCHOOL ADMINISTRATION.

The attorney general of Ohio has recently ruled that a teacher who is absent because of a contagious illness, is entitled to receive her salary for the time of illness. The decision points out that where a board employs a teacher for a fixed term at a definite salary, and the teacher is compelled to be absent because of a contagious disease, she is entitled to payment provided she resumes teaching for the board.

The elementary teachers of the physical education department, Cincinnati, O., have asked for a minimum salary of \$1,500 and annual increases of \$100 up to a maximum of \$2,599. In requesting the increase, the teachers point out that the minimum at present paid is too low to attract new teachers, and the maximum is not sufficient to hold those who have proved their worth.

The demand for higher pay has asserted itself in London, England. H. G. Wells, the author of *The Teachers' World*, says:

"As an old teacher I should sympathize with the demands of the London teachers anyhow. They are treated meanly, overworked, underpaid and insufficiently respected. But there are much wider grounds than that for my support of their appeal for better pay and increased numbers. General education is the foundation of the modern civilized community; everything else rests on that, public peace, economic prosperity, progress, health. And you cannot have that foundation safe and sure unless you have a much larger staff of able teachers per thousand pupils than London employs and unless you maintain the general quality and vigor of these teachers by fair and sufficient pay. Cheap teachers mean a jerry-built social system. To sweat your teachers is to prepare a revolution."

Governor Smith of New York State has signed the McGinnies bill providing for a state teachers' retirement fund. The plan becomes effective in August. Under the terms of the law, teachers with the exception of those who are

members of local district systems, are eligible for admission.

Teaching service of 25 years and an age of 60 render a teacher eligible for retirement. Any teacher who reaches the age of 70 may be retired involuntarily upon request of the school officials. Upon retirement, the teacher receives an annuity which is the equivalent of accumulated contributions at the time of retirement and a pension of one-quarter of the final average salary. Members will pay two and six-tenths per cent of their salaries into the fund.

St. Louis, Mo. The school board has ruled that high school teachers must either withdraw from the American Federation of Labor or suffer the loss of their teaching positions. Under the ruling, any teacher who is a member, or who becomes a member, of any labor organization will be subject to immediate dismissal.

Attorney General John Arbuckle of Arkansas has ruled that unless definite appropriation has been made by the district, the general building fund is the only source from which money for "teacherages" may be drawn.

In explanation of the ruling, the attorney general pointed out that school boards of special districts are corporate bodies, and can exercise only such power as has been delegated by statute. The school boards, therefore, may only build "teacherages" after construction has been authorized by statute. Money in the treasury voted for general building purposes may be used.

Light has been thrown on a heretofore undiscussed cause for the serious dropping off in the teaching profession in a letter received by State Supt. C. P. Cary of Wisconsin, from a woman teacher. She is teaching in a small town, amidst apparently execrable conditions. Following are extracts from her letter:

"There are no young people here of an acceptable type with whom we can associate. The young folks who wish to amount to something leave town for school or better positions than this town offers, the others work at the factory. The only modern convenience here is electricity for a part of each day. It is a city

controlled by retired farmers, who do not believe in civic improvement, and therefore offers no comfort to the stranger accustomed to the modern conveniences of villages, to say nothing of larger cities.

"Twice a week there is a movie in town. Occasionally, this is 'passing fair,' but generally it is disgusting. Every two weeks there is a dance. It is advertised on the screen, 'A good time assured. A lot of nice girls.' A self-respecting girl does not care to be a drawing card for a public dance. If she goes she must either just look on or be expected to dance with any and all sorts of vulgar fellows whose family may be 'influential', but whose manner of dancing is nothing less than insulting to the girl he dances with.

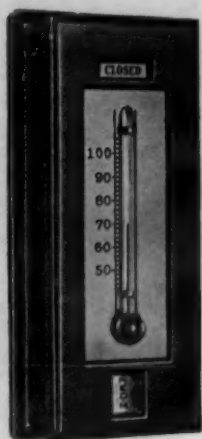
"Certainly such conditions cannot be conducive to satisfaction, good work, or fear or respect of public opinion or the authority of the powers that be. I have become discouraged, and my ambition is but a wee, small thing. I no longer care to give myself to my work."

Mr. Cary has appealed to the Women's clubs in the state for help in alleviating such drab, uninteresting conditions and help stimulate and encourage interest among able young men and women in the profession of pedagogy.

The Boston school committee has asked the legislature for power to increase its appropriations by an additional 82 cents, to provide for larger salaries, supplies and fuel. If the legislature passes the bill, the teachers will be successful in their demand for a flat increase of \$600 a year.

Supt. Frank O. Draper of Pawtucket, R. I., has reminded the teachers of a rule that deduction of half-pay for absence due to illness, will be made on the same basis as that for absence for other reasons.

State Comptroller John A. Chambers of California, in a letter to State Supt. W. C. Wood, has recommended that legislation be passed to divert the entire inheritance tax collection to the state's school fund. The annual collections from the tax have reached between \$3,500,000



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and \$4,000,000. Of this amount, \$250,000 is applied to teachers' salaries.

Indianapolis, Ind. The board of education, in accordance with a resolution recently adopted, has given authority to Supt. E. U. Graff under which he will estimate the qualifications of each teacher and place instructors on the salary schedule in accordance with his judgment. The resolution reads:

"The superintendent shall be given full power to evaluate the teaching experience, professional, personal and other qualifications of each teacher, whether previously or concurrently employed, and shall determine the proper place in the schedule for each teacher. He shall have full power to determine the capacity and right of each teacher to progress upward thru the various graduations. When the teacher's status in the schedule is so fixed by the superintendent, he shall state the reason for such status to the teacher."

State Supt. Walter E. Ranger of Rhode Island has addressed the schools of the state calling attention to the reclassification of teachers' certificates of qualification. The board has recently adopted amendments covering certain changes in the issuance of teachers' certificates of qualification. These changes are as follows:

The issue of emergency certificates will be discontinued after June 30, 1920, and the commissioner of education will issue to teachers for immediate service, preliminary certificates valid for not more than four weeks to cover the time required for filing application and evidences of qualification. After July 1, 1920, no teacher's certificate will be dated previous to the time when the application is received.

It is planned to revive the former practice of giving private examinations to applicants for certificates, who cannot qualify on credentials. The new preliminary certificate meets any emergency of quick engagements by affording time for presenting credentials or taking an examination.

"As formerly, only graduates of colleges and normal schools with full Rhode Island professional qualifications will receive regular profes-

sional certificates on application; but graduates of colleges and normal schools not fully qualified in professional requirements may receive temporary provisional certificates on condition that they will so qualify within a reasonable time by taking extension courses, attending summer school or by study and examination. Temporary certification may be extended beyond one year on credit for progress in the required preparation.

"The issuance of 'grade' certificates has been discontinued and a new series of certificates has been adopted by order of the board. All existing certificates will remain valid and those renewable will be renewed as formerly, unless the holder applies for a professional certificate of the new series."

The new form of certificate displaces the old forms which have been in use up to the present. Quakertown, Pa. The salaries of teachers have been raised. The lowest advance was thirteen per cent and the highest eighteen per cent.

Employment of untrained teachers thruout the state of Connecticut, with the exception of Bridgeport and New Haven, will be necessary it is predicted, to fill the vacancies in the teachers' corps. The city of Bridgeport, according to Supt. Slawson, faced somewhat the same situation as other cities now are, when the war boom increased the registration. There were 87 teachers brought in from outside in 1917, 86 in 1918 and last year about a dozen, besides 75 local girls who were teaching out-of-town.

According to Mr. Slawson, future prospects are bright in view of the fact that there are now between three and four hundred high school girls registered for normal, and there appears to be an upward trend in the ambition of young women to teach school. This year 79 graduates elected normal school work, which is the largest number ever placed in this work.

Mr. Slawson declares the state may well adopt the Bridgeport system of ascertaining when students are freshmen, just what their intentions are for the future, and stimulating the bent of girls for teaching.

Raleigh, N. C. The school board has refused

to meet the salary demand of the teachers and in consequence is facing a serious shortage of trained instructors. Out of 65 teachers and principals, 35 vacancies are to be filled, 20 teachers having resigned since the board gave its ultimatum.

The situation has been faced by the local parent-teachers' association, and a meeting of the civic organizations and members of the municipal government has been called to plan measures that will provide a remedy.

Cleveland, O. The high school teachers have won their demands in a long drawn out salary discussion with the adoption by the board of the new schedule proposed by Supt. F. E. Spaulding.

In adopting the schedule, the board accepted Dr. Spaulding's maximum \$3,600 for excess educational qualifications, but made it possible for teachers with only one year's excess training over the standard, to reach this maximum. Dr. Spaulding had set it at two years.

Newport, Ky. The school board faces a deficit of \$1,564 in the granting of increases of \$100 to each of the 102 teachers. The teachers who went on strike recently for flat increases of \$300, returned to duty when assured that increases would be forthcoming if the funds could be provided.

The State of New Jersey recognizing the shortage of teachers, has begun a campaign for recruiting the teacher supply of the state. A circular letter prepared by a committee of teachers in the normal schools and signed by State Superintendent C. N. Kendall has been sent to all high school juniors and seniors. All superintendents and principals were asked to make special efforts during the month of May to call the attention of students and other eligible persons to the opportunities in the teaching occupation. A prize essay contest on the subject "Why Become a Teacher?" was held in the high schools. Prizes aggregating \$100 were awarded.

Providence, R. I. An increase in salaries for teachers in the common evening schools of Providence was proposed which would amount to \$1 an evening increase.



Why Not Control Air In a School As You Do Water?

Suppose every water faucet in a school leaked.

There wouldn't be any time lost in calling a plumber.

Every door and window does leak air and dust and germs. There are cracks about them, only about one-eighth of an inch wide, it is true, but open enough for heat to escape and the cold air, often laden with impurities, to rush in. Doors and windows are not built sufficiently tight to close these cracks. The remedy is to call a weather strip man.

When a school is properly weather-stripped, you regulate the air as successfully as you control the water with good plumbing. When you close the doors and windows in inclement weather, the school is weather-proof; all the heat is kept inside and a uniform temperature is easily and quickly attained. When a school is closed up for the summer, it is dust and dirt proof.

The big thing to look out for in weather-stripping is the quality of the product. Identify the manufacturer—secure weather strip from a member of the Weather Strip Manufacturers' Association, an organization of responsible manufacturers who represent more than \$2,000,000 of invested capital.

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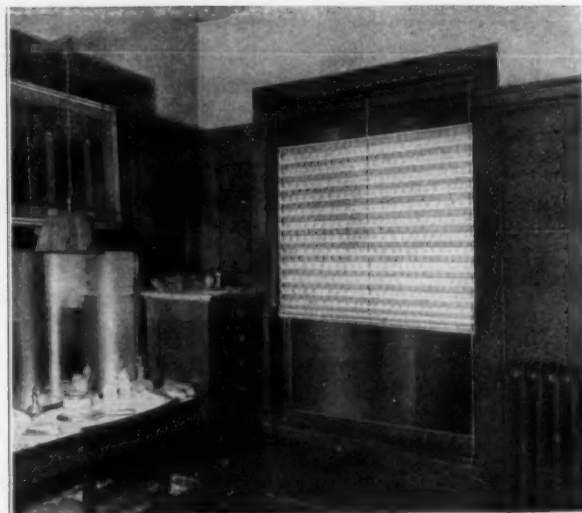
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Cloth may be dry cleaned. Its "sheer" quality gives it a fine cheerful translucency.

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It is strung on two tight piano wires. Pulling a cord at the right hand raises the shade from the bottom; left hand, lowers it from the top. Pulling both bunches the whole folded shade in a small space, in any position desired.

Athey shades are being adopted by the U. S. Government for hospitals and other buildings; by managers of large office buildings and by school-boards.

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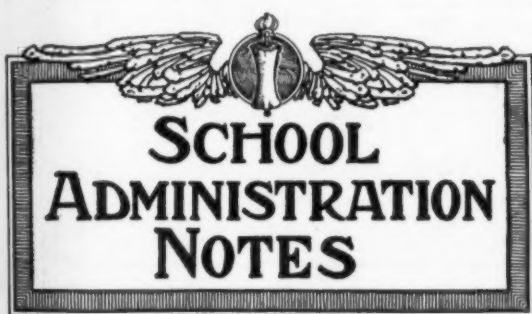
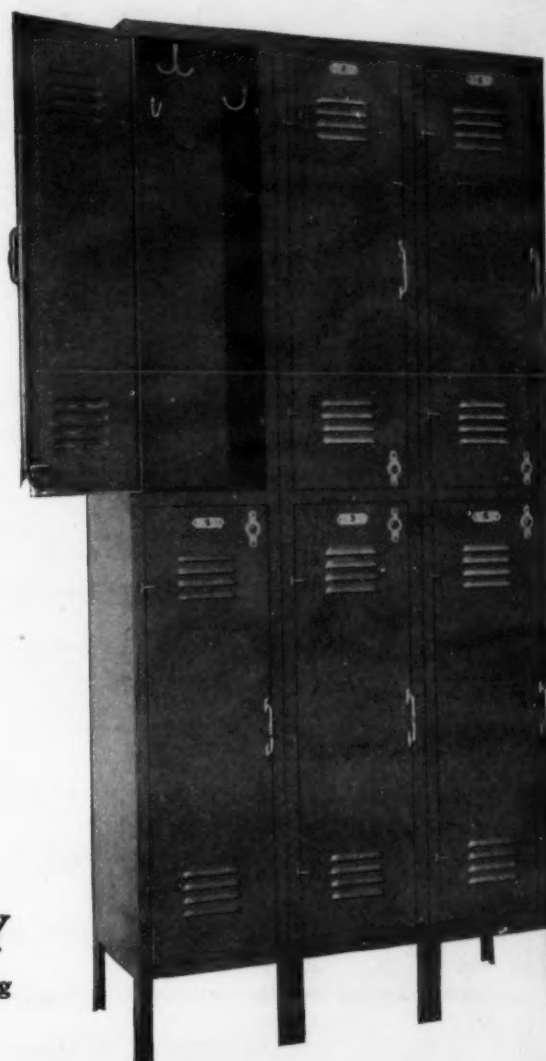
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New York City



Taunton, Mass. A continuation school will be opened in the high school next September. All employed boys and girls between the ages of 14 and 16 are required to attend.

Indianapolis, Ind. The position of district superintendent has been created with the appointment by Supt. E. U. Graff of five officials to fill this office at yearly salaries of \$3,600 each.

Mr. E. R. Ray who holds the office of supervisor of School No. 57, has been named as assistant to Supt. Graff. Mr. Ray will fill the latter position in addition to his duties as supervisor.

A nation-wide effort to keep up the efficiency of the schools on the available funds has been brought to the attention of members of the Chamber of Commerce at New Philadelphia, O., thru the presentation of statistics gathered by the American Cities Bureau.

Information concerning salaries, equipment and training has been compiled with a view of acquainting people with school conditions and pointing out the inability to meet expenses because of the lack of money.

The information has been collected and presented to the taxpayers in usable form in order that the necessity of more funds may be apparent to the school patrons and the public at large.

Supt. L. A. Fales of Attleboro, Mass., recently presented the results of a survey of backward children in the graded schools. Taking the age of 7 as the basis for first-graders, it is estimated that 184 children are three grades behind their age.

The condition is believed to be due to three main causes, namely, low mentality, frequent changes in residence, and lack of knowledge of the English language. The pupils are distributed as follows: Grade one, 15; two, 26; three, 39; four, 54; five, 43; six, 4; seven, 3. Out of an enrollment of 2,779 in these grades, the showing is considered above the average.

Hartford, Conn. The Bridgeport high school is facing a shortage of accommodations and a prospective student enrollment of 400 students next fall. In lieu of an adequate building, it is planned to lengthen the school day, to use the annex and the top story and basement rooms in both buildings.

Columbus, Kans. A summer school for grade children will be conducted in the Central school during the summer.

Hot Springs, Ark. A summer school will be conducted at the high school for those who wish to make up lost time or to pursue advanced studies.

Hugo, Okla. A summer school has been opened in the high school.

A survey of the school system of the District of Columbia is proposed. The survey will be conducted by the Senate District Sub-committee and a report is to be made to the Senate within a month.

Decatur, Ill. Plans have been made for the summer school which is to be held in the high school. The school will run for a period of eight weeks.

Radical changes in the educational system of Somerville, Mass., are recommended in a recent report of the property committee of the board of aldermen. It is the purpose of the board to eliminate the junior high schools and to make provision for a senior high school and a vocational school. The plan is opposed by the residents.

A survey of the school system of Fort Smith, Ark., will be made under the direction of Dr. J. H. Jewell, of the Department of Education, University of Arkansas.

The school board of Green Bay, Wis., has taken action toward delaying the survey of the schools. The action has been taken on account

of "an absolute lack of cooperation and studied hostility" on the part of the public press.

Supt. K. O. Snortum of Zumbrota, Minn., in presenting his report to the board, has included data for the past four years, making the document a very interesting comparative report on the items of attendance, enrollment, absence and tardiness, non-residents, graduates, scholarship and class ratings. In giving the statistics for the entire four years in groups it is possible to study the progress of the schools and to note whether there has been progression or retrogression.

In addition to these items, Mr. Snortum presents statistics on financial matters, general and social activities.

With thousands of young women at the threshold of marriage, among those to be brought back to the schools during the coming two years under the California Compulsory Part-time Education act, the problem of best serving the needs of these prospective homemakers has suddenly leaped to the front as one of the important matters now before school authorities.

Thru the operation of the act, it is estimated by Miss Maude I. Murchie, State Supervisor of teacher training courses in home economics, that 25,000 girls between the ages of 16 and 18 years will be affected. Many of the students, explained Miss Murchie, naturally are looking forward to early matrimonial careers, and for this reason the subject of home-making will be given an important place in the program.

Such subjects as sewing will take care of themselves, because all girls innately desire to dress "nicely" and look well, said Miss Murchie. However, she contends that the whole conception of home economics must be expanded from that of the study of cooking, sewing and cleaning, into a realization of its actual scope—the right care and conduct of human life in the home.

A cooperative school bank has been successfully conducted in the high school at Fitchburg, Mass., during the school year. The plan calls for weekly payments for each share sold to the pupil, the deposits being credited as desired, to college, business, etc. The shareholders have an organization, with officers customary to cooper-

(Concluded on Page 100)

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(Concluded from Page 97)

active banks, and the accounts are kept by the commercial department of the school. During the first month there were 700 shares sold to 175 students.

Supt. M. E. Fitzgerald of Cambridge, Mass., has recommended that the board reorganize the schools on the six-three-three plan.

Westfield, Mass. The board has lengthened the high school course from three to four years.

Brookline, Mass. Radical changes in the administration of the schools have been planned following a series of meetings of ten school-district parent-teacher associations. The proposed changes include the establishment of a junior high school and the separation of boys and girls in two high schools.

Indianapolis, Ind. Three junior high schools will be established next year. The attention of teachers and pupils will be concentrated upon special work in the upper grades in preparation for the high school.

The schools of Lewiston, Me., have adopted the daylight saving plan, in conformity with the action of the industries and business houses of the city.

The Harrison County board of Indiana has addressed Supt. L. N. Hines, asking for the repeal of the state deficiency fund law, the removal in southern Indiana of all laws and restrictions placed on school corporations with a high property valuation, and makes an appeal for the southern portion of the state to work out a school policy peculiar to their own conditions. The board enumerates its grievances as follows:

"1. Present laws and rulings do not permit us to bond our corporations for building purposes to the extent that it will enable us to build modern school buildings.

"2. Present laws and rulings place a premium upon small one-room school buildings and make consolidation for the most corporations impossible.

"3. Because of the foregoing not only does the state expend a needless amount of money, but we do not get value received for the expenditure.

"Unless some solution can be found for these problems we believe that it would be much better for the schools of our section of the state

should the state deficiency law be repealed; the schools freed from all the laws and restrictions placed upon the schools of corporations of higher valuations; and southern Indiana be permitted to work out a school policy peculiar to her own conditions."

The Riley compulsory education bill was passed by the House of Representatives of the Mississippi legislature on February 11th. At the same time, the Gore referendum amendment was passed, virtually destroying the purpose of the bill, but it is the hope of the educational leaders that the matter will be made a live issue at the state campaign next fall.

Dean Russell of Teachers College, Columbia University, summarizes the purposes of teachers' organizations as follows:

1. Every teacher in the organization must be one hundred per cent American.
2. The work of the teacher must be professional in character and honestly performed.
3. The teacher, as a faithful servant, is worthy of his hire.
4. The organization must be honest and straightforward in its dealings with the public.
5. The organization should cooperate with every other group of citizens for the promotion of the public good, but should avoid entangling alliances with anyone.

PERSONAL NEWS OF SUPERINTENDENTS.

Supt. J. E. Collins of Lima, O., has been re-elected for a term of five years, at a salary of \$5,000 per year.

Dr. Armand Gerson, principal of the Penn High School, Philadelphia, Pa., has been appointed associate superintendent of schools to succeed the late Theodore MacDowell.

Mr. A. W. Flaniken of Waco, Tex., has accepted the superintendency at Big Springs.

Mr. W. C. Williams of McComb City, Miss., has been elected superintendent of schools at Meridian, to succeed D. C. Hull.

Dr. M. Bates Stephens was reelected state superintendent of Maryland for a term of four years by the state board of education.

Contempt proceedings against superintendent of schools Mortenson and eleven members of the

school board of Chicago have been started. It is charged that the defendants failed to observe a court order restoring Dr. Chadsey to the position of superintendent and, instead, installed Superintendent Mortenson.

Albert B. Meredith, for several years assistant commissioner of education for New Jersey, has been elected commissioner of education for the State of Connecticut. The office was created in an educational bill passed by the last general assembly of Connecticut.

Dr. Meredith is a native of New Hampshire and a graduate of Boston University and of Wesley University. He has held positions in Plainfield and Nutley, N. J., and from 1912 up to the present time has been assistant commissioner of education in charge of secondary schools. He has been prominent as a member and officer of a number of educational associations and last year was President of the New York Schoolmasters' Club.

W. F. Hall of Russellville, Ark., has been elected superintendent of schools at Camden.

Supt. L. B. Hawthorne of Mexico, Mo., has been reelected for the ensuing year.

At a recent meeting of the Owensboro, Kentucky, board of education the salary of Superintendent James H. Risley was raised to \$4,500 and that of Principal of High School J. L. Faust to \$3,000. Ward principals, supervisors and high school teachers all received raises of from 30 to 35 per cent. Grade teachers were raised from 35 to 40 per cent in accordance with a schedule that recognizes preparation, experience and success grade. All employees of the city school system received similar raises.

Roy S. Dalley, who has been principal of the high school at Richmond, Mo., for the last two years, has been elected to take charge of the Department of Education in Lindenwood College at St. Charles, Mo.

Supt. Wm. D. Fuller of Portland, Me., has been re-elected at an increased salary of \$4,000.

Supt. F. A. Henderson, of Lead, S. D., is completing his third year as head of the public school system.



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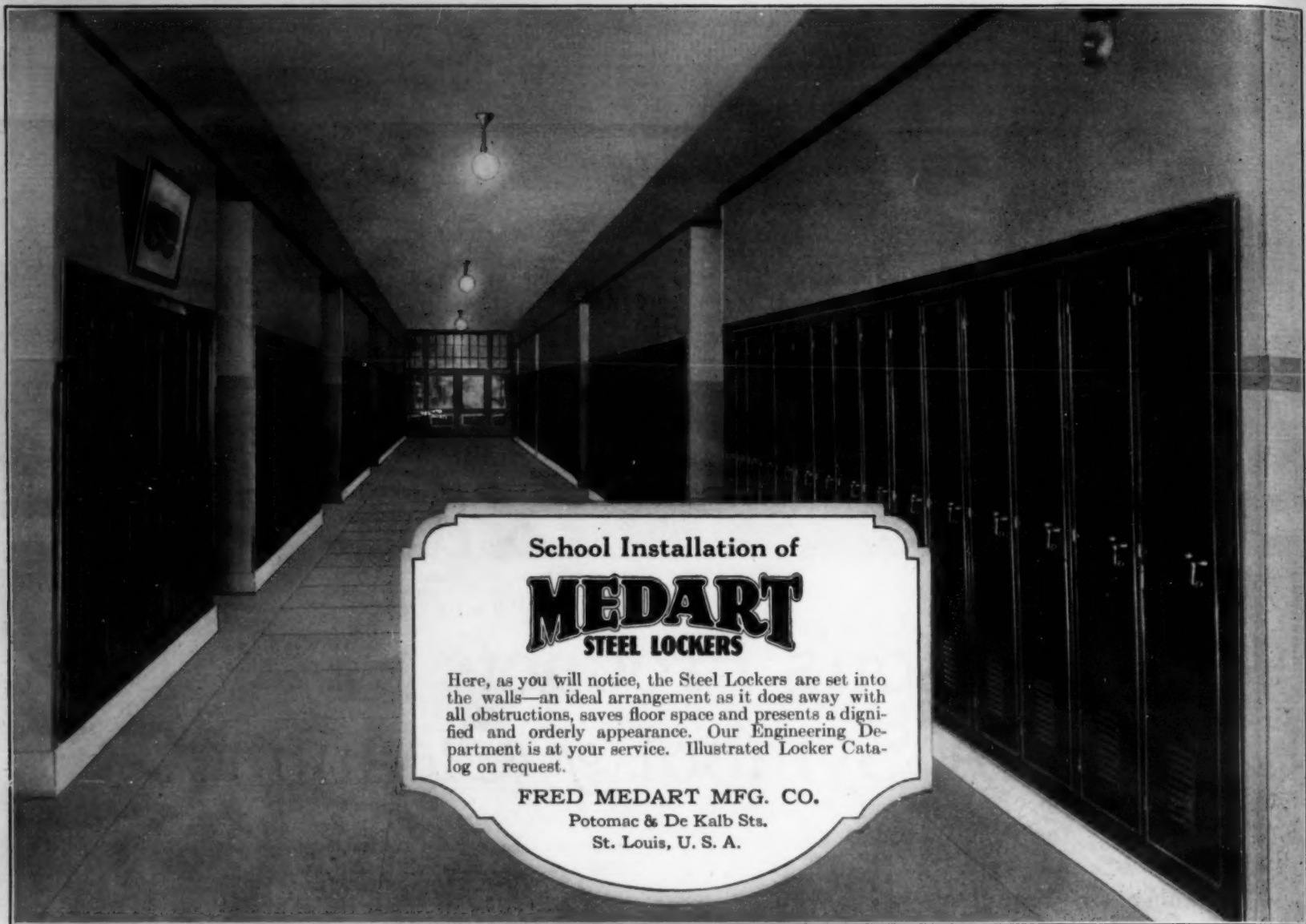
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THE EVANDER CHILDS SCHOOL, East 184th St. and Field Place, Bronx, New York, is saving time and money in their ash and rubbish removal through the use of a G&G Model E (electrically operated) Telescopic Hoist. Mr. John E. Babcock, Superintendent and Engineer of the school, finds that the Hoist enables one or two men to do the work of as many as five men—much **QUICKER**, **QUIETER** and **BETTER** than it is possible under the old methods. Mr. Babcock has no trouble at all in handling—with the help of the Hoist—as many as 100 cans of ashes daily during the winter months.

G&G Hoists are made in various models—electrical and manual—any of which can be installed in old or new buildings where there is an opening (preferably 4 ft. square but a smaller space can be used when necessary) in sidewalk, playground or alley. No need to excavate. Heel of Hoist rests on basement floor.

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We can show you how you can secure much better and quieter ash removal—at less cost—at YOUR school. Write us **NOW**—before the winter months arrive—telling us height of lift; quantity of ashes to be removed and how often; and whether cans are to be hoisted to sidewalk or high enough to dump directly into wagon alongside hoistway.

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TEACHERS' SALARIES.

Columbus, O. The voters have been asked to approve a 3-mill extra levy for school purposes, one-half of which is to be devoted to increases in salary for teachers.

The teachers' committee has prepared schedules for all classes of teachers providing for a minimum of \$1,250 and a maximum of \$2,000 for elementary teachers; a minimum of \$2,025 and a maximum of \$2,800 for elementary principals; a minimum of \$1,600 and a maximum of \$2,975 for high school teachers; high school principals will receive from \$3,900 to \$4,300 and teachers in the normal school from \$2,025 to \$2,500.

Butte, Mont. The board has given flat increases of \$300 a year to all grade and high school teachers.

Findlay, O. Increases of \$250 will be given to high school teachers and \$200 to grade teachers. Under the schedule, the minimum for grade teachers will be \$800 and the maximum \$1,300.

New Albany, Ind. Dissatisfaction expressed by the teachers over a recent increase in salary has led to a revision of the schedule as follows:

Grade teachers, Class A, \$95; Class B, \$105; Class C, \$115; Class D, \$125; high school, Class A, \$150; Class B, \$160; Class C, \$170; supervisors, \$155 to \$170; principals of ward buildings, \$155 to \$165; principal of white high school, \$250; principal colored high school, \$160; principals of departmental schools, \$175; instructors in departmental schools, \$115 to \$140.

Ottawa, Ill. The salary of the grade teachers has been fixed at \$900 per year, with a bonus of \$50 for the completion of the school term.

Rochelle, Ill. The board has raised the salaries of high school instructors from 15 to 25 per cent. The salaries of teachers reelected will be \$1,500 and \$1,600, and of new teachers \$1,400.

Halstead, Kans. The school board has raised the salaries of teachers from 30 to 50 per cent.

Newport, Ky. Following an almost complete tieup of the school system for 48 hours, the members of the teachers' association returned to their classes after a compromise had been effected in the matter of salaries. The teachers had asked for a flat increase of \$300 and the board has provided a guaranteed increase of \$200

on the regular basis, to be as close to the \$300 mark as possible.

Biddeford, Me. The teachers in the city and rural schools have been given increases amounting to \$200 a year. Under the schedule, the maximum salary for grade teachers in city schools is \$950, and that in rural schools is \$900.

Hannibal, Mo. A minimum of \$1,000 has been given to grade and junior high school teachers, and a minimum of \$1,200 to senior high school instructors.

A counter proposal to the salary schedule offered for a basis of discussion by Supt. F. B. Spaulding of the Cleveland schools, has been adopted by the Teachers' Federation. The counter proposal asks the same standard qualification maximums suggested to Dr. Spaulding by the salary committee of the federation. These maximums provide for \$2,640 for elementary teachers with two years of normal or collegiate work; \$2,970 for junior high school teachers with three years' training, and \$3,300 for senior high school teachers with four years' training beyond the high school.

The standard maximums proposed by Dr. Spaulding were \$2,160, \$2,430 and \$2,700, respectively. The standard maximums set by the federation are equal to the maximums proposed by Dr. Spaulding for teachers with two years' training in excess of the standard qualifications.

Dayton, O. Teachers of the rural schools, both grade and high, will receive increases of from 30 to 50 per cent.

Neenah, Wis. Graded salary increases ranging from \$200 to \$400 in elementary schools, and from \$200 to \$500 in high schools, have been given to the teachers for next year. The minimum salary in the grades will be \$1,000 and the maximum \$1,500. In the high school, the minimum will be \$1,000 and the maximum will be \$2,000.

St. Albans, Vt. The board has fixed a minimum salary of \$900 for teachers who have served a probationary period of two years. Increases of \$25 will be given for each year of service until the maximum of \$1,050 is reached in grade one, \$1,000 in grades two, three and four, \$1,050 in grades five and six, and \$1,100 in grades seven and eight.

New Bedford, Mass. Increases of \$350 a year

have been given to teachers. Additional increases of \$200 have been given the women teachers to more nearly equal that given to the men.

Huntington, Ind. Under a new schedule of salaries for next year, the minimum for beginning grade teachers is \$1,170 and for experienced teachers \$1,215.

In the high school, the salaries vary from \$1,440 for beginners and academic teachers, to \$1,800 for teachers of difficult and special subjects.

Aurora, Ill. Salary increases of \$300 for grade teachers and \$400 for high school instructors have resulted in great dissatisfaction. The grade teachers have demanded an increase equal to that given the high school teachers.

Milford, Conn. An additional increase of \$100 in salary has been given the teachers. The present increase is in addition to a previous one of \$300.

Columbus, Ind. A new schedule has been adopted under which teachers will be paid according to training, experience and education. The increase averages 35 per cent and the scale ranges from \$90 to \$200 a month.

Logansport, Ind. The board has adopted a schedule based on training and experience of the teachers. The minimum for grade teachers is \$1,000. High school teachers will receive a minimum of \$1,300 and a maximum of \$2,400.

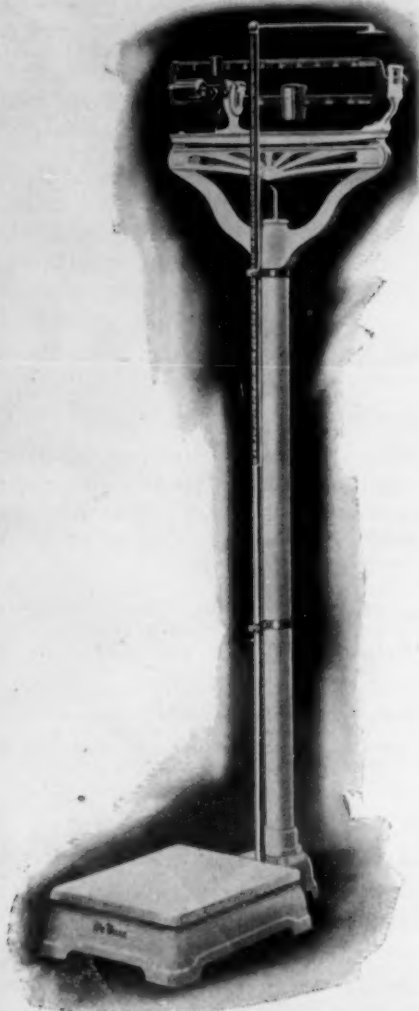
Newton, Conn. The board has adopted a salary schedule for elementary teachers. For high school graduates a minimum of \$750 will be given; those with a summer course will be given \$800, with increases of \$60 up to a maximum of \$1,000. For normal graduates, a minimum of \$900 will be given, with increases of \$50 up to a maximum of \$1,000.

Aurora, Ill. Average increases of \$400 have been given the teachers of the west side. The minimum has been fixed at \$1,000 and the maximum at \$2,200.

Everett, Mass. The minimum salary for grade teachers has been fixed at \$1,000 and the maximum at \$1,500. The maximum for high school teachers is \$1,700.

Seattle, Wash. Increases of \$300 have been given to grade and high school teachers.

Joliet, Ill. The average salary of the teachers



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has been raised to \$1,514 as a result of increases of \$300. Major teachers were given bonuses of \$50.

Providence, R. I. The minimum salary has been fixed at \$800 and the maximum at \$1,200.

Raleigh, N. C. Increases of 35 per cent have been given the teachers. The schedule establishes a minimum of \$800 and a maximum of \$1,200 for white teachers, and a minimum of \$550 and a maximum of \$750 for colored teachers.

Saco, Me. The board has given increases of \$125 per year. The increase which is the second this year, will bring the salary of a part of the teaching staff to \$925 yearly and the balance to \$950.

The school board of Menomonie, Wis., has adopted a schedule, ranging from \$1,050 for teachers with experience in the grades, to \$1,300, and from \$1,300 to \$2,000 in the high school.

Pittsburgh, Pa. The board has adopted the so-called Finegan schedule formulated by Dr. Thomas E. Finegan, state superintendent, after conferences with school officials. A total of five months' back pay for the amount of the increase due teachers when the June pay is made, will prove about \$250 for each teacher or an additional \$100 after the advance of \$150 is deducted.

Under the schedule, elementary teachers will be given a minimum of \$1,200 and a maximum of \$2,000 a year; junior high school teachers will receive a minimum of from \$1,550 to \$1,800 and a maximum of \$2,800, and high school teachers (non-college graduates) will receive a minimum of \$2,800 and a maximum of \$3,200 will be paid to college graduates.

The school board of Butte, Mont., has denied a request of the teachers providing for bonuses of \$100 for grade teachers, and an increase in the maximum salary of high school teachers to \$3,000.

The school board of Marion, O., has adopted a revised salary schedule, under which grade teachers are given a minimum of \$900 and a maximum of \$1,485, the latter to be reached in from ten to twelve years.

Principals of elementary buildings with eight rooms or less will be paid \$10 additional; principals of buildings with eight to twelve rooms,

\$15 additional, and those with twelve rooms or more, \$20 additional.

Fort Worth, Tex. Polytechnic teachers in the grades will be given increases of 33 1-3 per cent, beginning with the season 1920-21.

Warwick, R. I. Teachers, principals and supervisors have been given increases of \$300.

Ware, Mass. A new schedule just adopted by the board, provides that teachers in grade and district schools will be paid from \$750 to \$1,650. In the high school, women teachers will be paid \$1,000, with increases of \$100 up to a maximum of \$1,500. Men teachers will be given \$1,800 and principals \$2,500.

St. Joseph, Mo. The teachers have been given flat increases of \$200.

Fort Wayne, Ind. Supervisors and manual training teachers will be given increases ranging from \$500 to \$600. The increases will be based on years of service.

The board of education of Belleville, Ill., has adopted a salary schedule as follows:

For cadet teachers, the salary will be \$600 the first year, \$659 the second, \$700 the third, \$800 the fourth, \$900 the fifth and \$1,000 the sixth year.

High school graduates, with first grade certificates, will be employed the first year at \$700. The second year they will be paid \$800, the third year \$900 and the fourth year \$1,000.

High school graduates holding second grade certificates, will be employed as cadet teachers at a salary in advance of the first year (\$600) but not exceeding \$700, the salary of the third year, provided that the cadet secures a first grade certificate at the end of the first year if the salary has been \$700 and the second year \$650. Cadet teachers required to qualify with two credits of professional work yearly before they may receive the salary of \$1,000. For each year that the two credits are not earned, a \$50 decrease in salary will be made.

A further possible maximum of \$1,400 is provided for teachers who reach the maximum of \$1,300 and obtain further major credits of work. Increases of \$25 a year will be given for each major credit until the maximum is reached.

Neenah, Wis. Salary increases ranging from \$200 to \$400 in the elementary schools, and from \$200 to \$500 in the high schools have been

given. The salaries to be paid grade teachers range from \$1,000 to \$1,500 per year and those for high school teachers from \$1,000 to \$2,000.

Peoria, Ill. The board has raised the maximum salary for grade teachers to \$1,500, that of high school teachers, from \$1,900 to \$2,200 for men teachers, and for women from \$1,700 to \$1,900. Grade principals will receive a maximum of from \$2,200 to \$2,500.

Attorney General Hilton of Minnesota has rendered a decision to the effect that teachers may not lawfully be given a bonus. Extra compensation, it has been held, may be given only where additional duties are imposed upon teachers, and where otherwise given it is equivalent to a gratuity and constitutes an unlawful expenditure of public funds for a private purpose. The decision was given to the Duluth board which had been asked to grant the teachers' bonus.

Oshkosh, Wis. The board has given increases in salary averaging 32 per cent over last year's schedule.

Cynthiana, Ky. Increases ranging from \$200 to \$300 have been given to the teachers.

Washington, Pa. The board has given increases in salary ranging from \$100 up to \$600, based on the length of service. Grade teachers will begin at \$810 and will advance to the maximum of \$1,200 after seven years' service. High school instructors will begin at \$1,000 and will advance to the maximum of \$1,500 after ten years' service.

Grade principals will receive \$1,300 for the first year's service and will advance to \$1,500 after the completion of a satisfactory term of service.

Ottawa, Ill. The grade teachers have been given increases of \$300.

Anderson, Ind. Thirty high school teachers have refused to sign contracts for the next year unless given increases of fifty per cent. It is also asked that the board make a rule that high school teachers possess college degrees.

Lincoln, Ill. The salaries of grade teachers have been advanced \$100 per year. Under the new schedule the minimum is \$1,120 and the maximum \$1,250.



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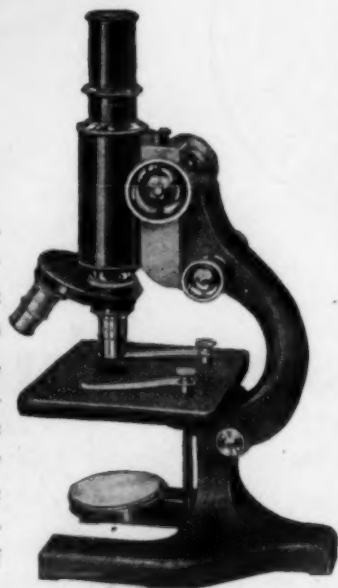
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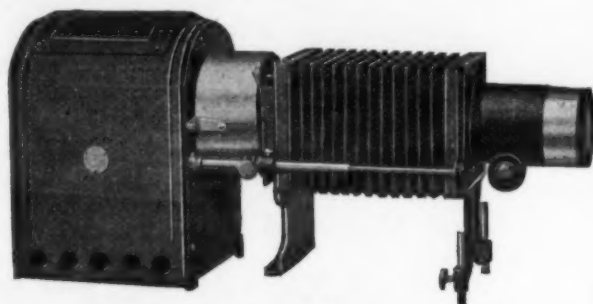
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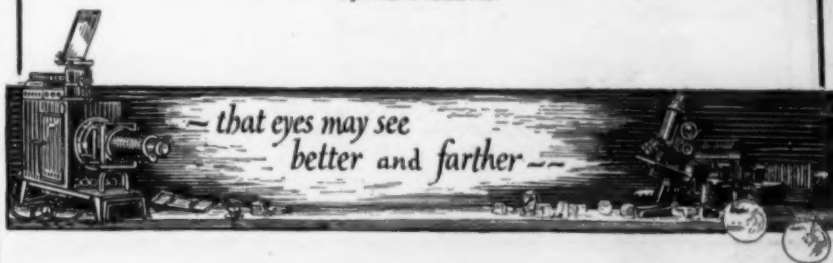
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NEW BOOKS

New Geography.

By Professor Wallace T. Atwood. Book Two. Cloth, 304 pages, illustrated. Ginn & Co., Boston, New York, Chicago.

This is the second book of the new Frye-Atwood series of geographies and is the work of Prof. Atwood. It presents the work to be covered in the upper grades or in the junior-high school.

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In the Shadow of Great Peril.

By Horace A. Wade. Cloth, 172 pages. Reilly & Lee Co., Chicago, Ill.

The author is an eleven-year-old boy who began writing at the age of 6. He tells a real boy's story, with all the vigor, snap and energy that go with boy life. There is a real plot, conflict, climax and satisfactory conclusion.

The book is prefaced by George Ade and sent on its way with the well-wishes of Irvin S. Cobb. Considering the tender age of the author the story is a remarkable production, and will, no doubt, meet with a welcome reception.

Strange Case of Dr. Jekyll and Mr. Hyde.

By Robert Louis Stevenson. Edited by Richard Burton. Cloth, 114 pages. Gregg Publishing Co., New York, Chicago, Boston, San Francisco.

Stevenson's famous story needs no discussion here. The thing worthy of special mention is the fact that the publishers have brought out this remarkable bit of fiction in a handy pocket edition, and have supplied the same with a concise biography of the author. The book is one of the Living Literature Series brought out by the publishers.

Effect of the War on World Trade and Industry.

By O. P. Austin. Paper, 12mo, 40 pages. D. C. Heath & Co., Boston, Chicago.

The fifty new political subdivisions of the world's inhabited territory are briefly described in this pamphlet from the standpoint of trade and industry. The booklet will form a valuable

adjunct to any course in economics, commerce or commercial geography. The writer puts the big facts of the new situation in a compact, graphic way that gives the reader a very accurate birdseye view of each country, its population, its financial and industrial strength and its general standing in the new family of nations.

Arithmetic Habituated Economy Method.

By M. G. Clark. Series A. Paper, 80 pages. Laurel Book Company, New York, Chicago, Philadelphia.

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(Concluded on Page 109)

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(Concluded from Page 107)

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Rational Arithmetic.

By George P. Lord. Cloth, 151 pages. The Gregg Publishing Co., New York, Chicago, Boston, San Francisco.

This book will appeal to commercial high schools where of necessity the course in arithmetic must afford a thorough review and drill in rapid arithmetical operations and a complete outline of business practice as it finds expression in the use of figures. The first half of the book is devoted entirely to practical exercises and the second half to illustrated solutions of the principles of commercial arithmetic. The last half of the book is really a reference work intended to convey not only definitions, principles and facts but also accepted reasoning and brief methods of solution. The two parts are closely tied together by constant cross references.

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By Benjamin F. Moore. Cloth, 434 pages, illustrated. D. C. Heath & Co., New York, Boston, Chicago.

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Henriette Masseling. Cloth, 336 pages. D. C. Heath & Co., Boston, New York, Chicago.

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Everyday Arithmetic.

Revised Edition, Intermediate Book, 278 pages; Revised Edition, Advanced Book, 376 pages. By Franklin S. Hoyt, former Assistant Superintendent of Schools, Indianapolis, Indiana, and Harriet E. Peet, Instructor in Methods of Teaching Arithmetic, State Normal School, Salem, Massachusetts. Published by Houghton Mifflin Company, Boston, New York, Chicago.

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By Harold Ordway Rugg and John Roscoe Clark. Cloth, 368 pages, illustrated. Price, \$1.60. World Book Co., Yonkers, N. Y.

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THE STATUS OF SCHOOL VENTILATION IN THE UNITED STATES.

(Continued from Page 53)

data to warrant their presentation were gathered on only a few of the points under consideration. The following is a summary of such data:

In the rooms with natural (window) ventilation, the dry bulb temperature varied sharply from 70 degrees to 82 degrees, the wet bulb temperature from 49 degrees to 56 degrees, and the sense impression fluctuated between the extremes of "hot" and "cool," seldom touching the mean of "pleasant."

In the mechanically-ventilated rooms, the dry bulb temperature was almost constant at about 70 degrees and the wet bulb temperature hovered consistently around 55 degrees. The sense impression was uniformly "pleasant," not varying at all.

The sense impression in the naturally-ventilated rooms showed a definite and striking relation to the wind, whereas in the mechanically-ventilated rooms, it was not thus affected.

The factor which necessitated the discontinuation of the tests was a feeling of dissatisfaction that developed in connection with the conditions that were obtained in the naturally-ventilated rooms. Whereas, in the beginning the attitude of the teachers had been most favorable and they had shown great eagerness to be assigned to the naturally-ventilated rooms, before the observations had been carried on for two months, a strong opposition arose which spread to the children and thence to the parents, making it impossible to further conduct the experiment upon an unbiased basis. The contentions of the opposition were as follows:

a. It was impossible to keep the temperature and air motion conditions in the naturally-ventilated rooms within the bounds of comfort.

b. The absence, because of illness of pupils and teachers in naturally-ventilated rooms, increased to an alarming extent.

c. The air in the naturally-ventilated rooms was stagnant and heavy, causing depression and headaches.

Of the 22 answers received, twenty were in favor of mechanical ventilation, one (a southern state), did not favor it, and one favored a combination of mechanical and natural ventilation. The results are shown below:

Tabulation of Replies From Boards of Education.

Favorable to Mechanical Ventilation.

Salt Lake City, Utah.
Boston, Mass.
Newton, Mass.
Rochester, N. Y.
Davenport, Ia.
Elmira, N. Y.
Newburgh, N. Y.
New Rochelle, N. Y.
Hartford, Conn.
Watertown, N. Y.

Unfavorable to Mechanical Ventilation.
Athens, Ga.

Erie, Pa.
Portland, Ore.
Pittsburgh, Pa.
New York, N. Y.
Youngstown, Ohio.
Everett, Mass.
Decatur, Ill.
Binghamton, N. Y.
Seattle, Wash.
St. Louis, Mo.

Favor Combination of Mechanical and Natural.
Lincoln, Nebr.

With few exceptions, it was very evident that, even from the schools that favored mechanical ventilation, few authentic data were to be obtained. Their reasons for preferring the mechanical ventilation were based almost exclusively upon "sense impression." No tests had been made and no records kept. Exceptions to this rule were Lincoln, Neb., Pittsburgh, Pa., and New York, N. Y.

Lincoln, Neb., sent a report by Dr. Katherine H. K. Wolfe, supervisor of hygiene in the Lincoln schools, claiming that a combination of window ventilation and mechanical ventilation is the desirable method and that, where a choice

between natural ventilation and closed window mechanical ventilation must be made, better health results are secured with the natural ventilation. Certain tests are quoted, among them the following:

"A principal in charge of a recently remodeled fourteen-room school building equipped with a plenum ventilation system, similar to the one used for the tests in Detroit, except that it has no air washer, has demonstrated this fall that it is possible to combine window ventilation with even this system. The principal and most of her teachers possess the 'fresh air habit.' Pupil health committees assumed responsibility for classroom ventilation in ten rooms. In the ventilation of this building it was assumed that a smaller continuous supply of fresh outdoor air in a classroom is preferable, from the sanitary standpoint, to a larger supply at long intervals plus the possibility of not obtaining it thru neglect.

"At no time has the temperature in any occupied classroom in this building been found as high as 72 degrees by the inspector, during frequent visits. The temperature in the different rooms in this building usually ranged from 66 to 69 degrees.

"The per cent of attendance in this building this fall, ranked the highest of all buildings in the Lincoln system.

"The consumption of fuel was no greater than in another recently remodeled building, equipped with mechanical ventilation, where the windows were kept closed, higher temperatures prevailed, and where the per cent of attendance was the third from the lowest in the school system."

Pittsburgh, Pa., takes a very strong stand for mechanical ventilation and summarizes its advantages, as:

1. Positive compliance with state school code requirements of 30 cubic feet per minute of fresh warmed air per pupil;
2. More accurate temperature and humidity control;

(Concluded on Page 113)

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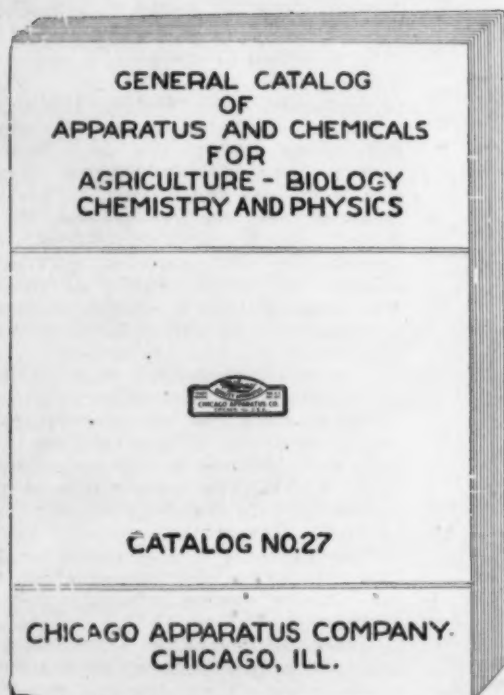
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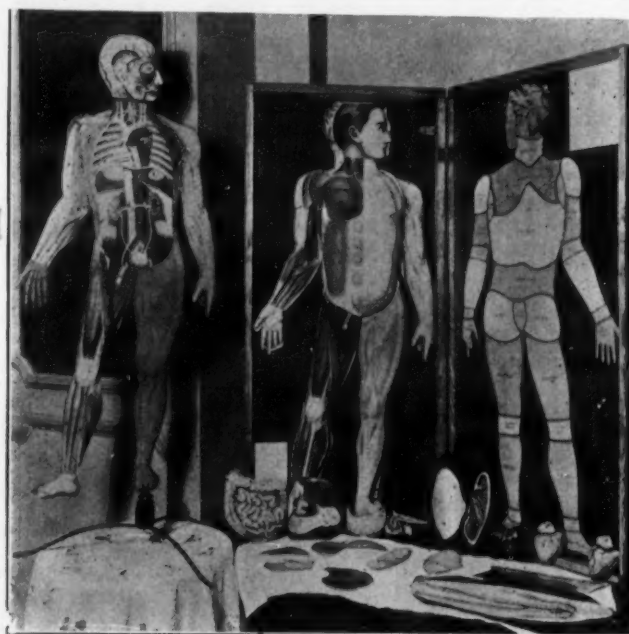
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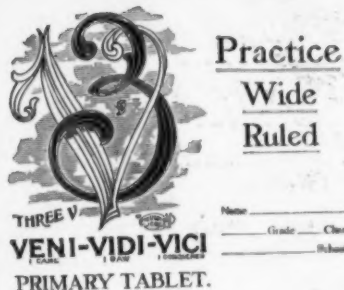
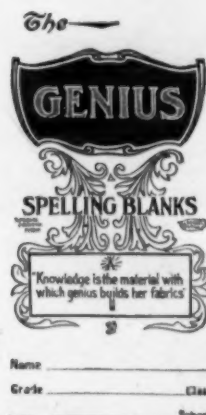
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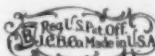
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(Concluded from Page 111)

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In New York, N. Y., owing to operating and maintenance conditions that left much to be desired, mechanical ventilation has not received as full a test as is desirable. However, Mr. F. G. McCann, chief of the heating and ventilating division of the Bureau of Construction and Maintenance, offers the following comments that are of interest:

"In years past, under normal conditions, many of our mechanically ventilated plants, run by intelligent and conscientious janitor-engineers, showed excellent conditions and teachers and principals not only were satisfied but actually demanded that mechanical ventilation be provided during the colder months.

"Some years ago a careful survey was made by Dr. Luther Gulick of the Sage Foundation, as to relative effects of the various systems of ventilation on the pupils of our schools, as shown by promotions, etc., and this showed a markedly higher rate of promotions in mechanically-ventilated schools than in gravity or open window ventilated schools. This was by average of all the schools in a class, being for one hundred or more buildings in each class and not making any allowance for antiquated installations. It is believed that a comparison based on properly equipped and properly operated schools would show even more clearly, the advantages of mechanical ventilation.

"The tests made in our schools by the Department of Health of this city and reports by Dr. S. Josephine Baker of that Board in February, 1918, were carried on under conditions which render them of little value except as evidence of improper conditions, shown thereby to exist under present methods of control.

"No attempt was made in such tests to confine the study to modern schools, equipped with well-designed and well-operated plenum installations, as compared with modern schools having only window ventilation. The schools selected were of all types and ages and no special supervision of operation was given, hence so many variable factors enter into the causation of the noted readings that it is impossible to deduce therefrom any reliable data of the effects of plenum ventilation as compared with window ventilation.

"As an endeavor to better conditions by unifying control of design, installation, maintenance, operation and fuel supply, heretofore handled in separate and largely unrelated bureaus, our Board of Education has recently appointed a Superintendent of Plant Operation, who will in the near future have control of all of the above matters, thus making better control and assuring better operating conditions. Much is hoped from this change.

"Also for the buildings now under construction and for those designed by us some years past, we have arranged the equipment so that the auditoriums, the playrooms and gymnasiums, and the classrooms, may be separately heated and ventilated, in order that it may be unnecessary to heat or ventilate unoccupied portions of the buildings. This makes it more certain that ventilation will be provided as needed, especially outside of regular school sessions, and effects economy of operation.

"When economic, and especially fuel, conditions become more normal again, we expect to be able to greatly improve conditions of ventilation in our buildings, but under the conditions heretofore existing (to correct which frequent abortive attempts have been made), there is no question but that the ventilation in our schools left much to be desired, largely due to operating and maintenance conditions beyond our control."

In view of the national interest which this question has assumed, a statement recently made by Mr. Frank Irving Cooper, member of the society, in the November, 1919, issue of the

SCHOOL BOARD JOURNAL, is here, with his permission, presented in abstract:

"One of the first studies of the Committee on Standardization of Schoolhouse Planning seemed to show that five per cent of total area of schoolhouses should be the norm for the ventilating ducts. These were the ducts for delivering the fresh warmed air to schoolrooms and the ducts for carrying away the vitiated air from the same rooms. This norm was decided upon after a considerable number of school buildings had been investigated and the results compared with the known requirements of states whose school planning regulations had been tabulated in 1915. Thirteen of these states required 1800 cubic feet of air provided per person per hour. The state of Wisconsin made the exception by requiring 1200 cubic feet per person per hour. Two states, Massachusetts and Minnesota, required this air to be delivered at the register at a speed not to exceed 300 feet per minute which has been generally accepted as correct by heating engineers.

"These data would seem to require a fairly constant flue area dependent upon whether the propulsion for the air was a gravity or positive system. The state of Indiana takes cognizance of this difference by requiring a proportion of sixteen inches flue area for a gravity system as against ten square inches for a fan or positive system.

"From all the facts at hand we should incline to the opinion that skilled architects and engineers having in mind to comply with the law would so lay out their ducts that comparable results would be obtained."

Newburyport, Mass. A general increase of salaries approximating ten per cent was granted grade teachers with an extra \$50 for women principals. High school teachers were also given substantial raises. The salary of Wm. C. Moore, superintendent of schools, was advanced from \$2,700 to \$3,000.

Haverhill, Mass. Teachers have been granted increases in pay at the rate of \$100 a year and also the usual automatic increases of \$50 or \$75, if they have not reached the maximum pay.



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(Concluded from Page 50)

Mr. R. M. Scobell read an informational paper on "School Budgets." He showed that the ideal budget must adapt itself to local conditions and that there will be necessarily variations between cities on the basis of these conditions. He argued that the three steps in the making of the budget are: First, an intelligent and thorough formation, embracing the entire needs of the district and including also a comprehensive plan for the carrying out of present or new operations for the succeeding year. Second, a thorough and exhaustive investigation of those needs, and a distribution of funds in order that each and every department will function well and be properly balanced. Third, a constant and careful watch on the part of those responsible that appropriations be expended in the manner and form laid out, and that these expenditures be strictly adhered to in order to avoid deficits.

The association was most hospitably entertained by the Minneapolis school authorities, for which Mr. G. F. Womrath acted as official host. The hotel and meeting places were ideal and the opportunities for visiting schools could not be surpassed.

The business meeting of the convention was comparatively brief. The following officers were elected:

President, Mr. G. F. Womrath, business manager of the board of education Minneapolis; vice-president, Dr. G. W. Gerwig, secretary of the board of education, Pittsburgh, Pa.; secretary, Mr. Arthur Kinkade, secretary of the board of education, Decatur, Ill.

The association appointed two new members to the Committee on Standardization, which is to cooperate with the N. E. A. committee on the same subject. The new members are Mr. J. J. Maher and Mr. J. J. Patterson, both of Boston.

At the annual banquet, local speakers discussed rather eloquently the problems of Americanization versus Socialism, and Military Training. The following resolutions were adopted:

First. That while American freemen will ever hold themselves ready and willing to fight and die if necessary rather than forfeit liberty, they recognize in education the institution which best prepares all the people for peace.

Second. That the most practical and effective way to make and to keep the nation safe is to reduce the high cost of ignorance.

Third. That at present and in the future, it will be most important to see to it that every penny provided for education is to be expended that it will bring full measure of value; that the purpose for which it is expended is properly and permanently recorded, and clearly and accurately reported to the people.

Fourth. That comparisons of costs be made in like terms.

Fifth. That there be provided from national, state and local sources additional and adequate educational funds.

STANDARDIZATION OF SCHOOL ACCOUNTING

(Concluded from Page 45)

the many forms of social, recreational and community service which, while not strictly educational in their nature, are sufficiently appropriate to the facilities and means afforded by the modern school building as to be conducted therein. This item may be treated in similar manner to educational activities and "unit" costs deduced therefrom.

However, at best there is an element of inexactness in the problem when reduced to "unit" cost, but the resultant figures are sufficiently good for purposes of comparison, having in mind, tho, at all times, the reservation that attendance in such activities is wholly voluntary

on the part of the individual and consequently sporadic or fluctuating.

Item 7 (Administration)—has been treated of hereinbefore with probably sufficient detail and explanation.

The recognition of these natural groupings and the principle involved therein, is the main step in the establishment of "standardized" accounting and statistics. So simple is the application that it should be only necessary to take the accounts of any school system, great or small, just as they are, and identify them, each and every one, with the numbers of titles given to the natural divisions which have been set forth. Surely no one need feel the trouble involved, and certainly not the expense. It means reporting upon the same things in the same way, and the establishment of a common language, meaning and definition.

It will save time by the fact that it will not be necessary to establish equivalents and definitions when we try to interchange our experiences and our ideas.

Standardization is a panacea for many difficulties now encountered. In our budget requests, we can do much to convert civic and taxing bodies to a sense of our needs, if we can point to the fact that other communities are spending money usefully in certain proportions along the lines of these common divisions. Thus we may be able to substantiate many legitimate school demands by buttressing them with a background of experiences and operations conducted in other systems.

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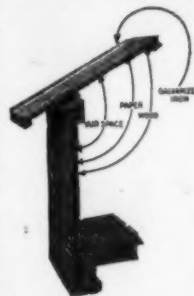
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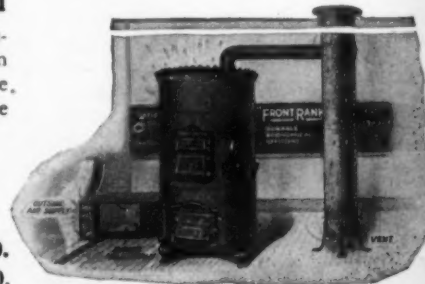
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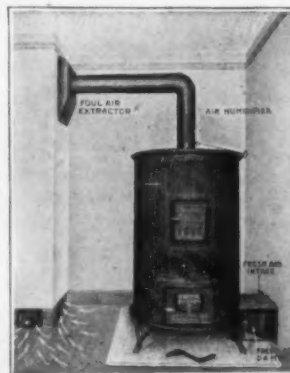
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HOW THE SALARY SCHEDULE IS ABUSED

(Concluded from Page 32)

the unfairness of the board, for she sees many among her associates who are just as deserving as herself.

The board must consider many elements in preparing its schedule. Local conditions, available funds, and the experience, rating and preparation of its teachers, are all important items. Some boards believe that experience should be recognized; others pay for scholarship; while others ignore both, and base their salaries solely upon the teachers' rating. Some principals stress one thing; some another. But a poor schedule, rigidly adhered to, is far better than a good schedule which is abused, and the board of education with the courage to abide by its own acts; with confidence in the judgment of its superintendent or supervising principal; and with an earnest desire to be fair to all its employees; will avoid many pitfalls if it keeps its new salary list in operation long enough to give it a fair trial.

No valid reason has ever been advanced for this abuse. The board should be certain that its schedule is a just one; and then, secure in that knowledge, stand behind it to the letter. Any other course will inevitably result in a gradual lowering of the standard of the teaching staff, and in a constant feeling of discontent thruout the entire system. Teachers are quick to resent injustice, and will not remain in positions where they are subject to it. No board of education can afford to acquire a reputation for unfair dealing.

The picture is not overdrawn. Many a school board, who wonders why so many of its teachers leave every year, may find the reason for the dissatisfaction of its staff in its own efforts to

satisfy one or two favorite teachers by breaking its schedule for their benefit. Metropolitan systems suffer the least in this respect, for the individual becomes of less importance as the number of teachers in the system increases. The evil is greatest in the smaller districts, where the personal element enters so largely into the relations of teacher and school board, and where the opportunity for favoritism almost always exists.

If a salary schedule is worth making, it is surely worth keeping.

DEMOCRATIZATION OF SCHOOL ADMINISTRATION

(Concluded from Page 42)

means that more minds will participate in the judgments as to what should be educational practice. The object will be the same, the welfare of the child; the method will be different, namely, a wider participation in educational decisions.

In an educational democracy all the forces in the organization strive to find what is the best thing to do for the child. The teacher, the supervisor and the superintendent unite to study this question. There is mutual toleration and respect for the other's opinion. In taking counsel as to what is best there must be equality of standing. The better idea may often be borne in mind of the worker of lower rank. It has been the worker at the bench who by invention has revolutionized the conduct of industry. Invention has thrived in a democracy and languished in autocracy. Greater democracy in educational administration means not an escape from the burden of work; it probably means more work, but work with more zest because we can put our hearts into it, because we can do something that we believe in. We will

work with the artist's zeal because we have a canvass of our own choosing and the picture burns in our brains until we can give if the expression of our soul's desire.—Address.

WORKMEN'S COMPENSATION ACT

(Continued from Page 40)

West Virginia: School employes come under the Workmen's Compensation Act of this state.—F. J. McAndrews, Secretary, State Compensation Commissioner.

Wisconsin: Janitors only come under the Compensation Act.—George P. Hambrecht, Chairman, Industrial Commission.

Wyoming: School employes in this state do not come under the Workmen's Compensation Act.—Katharine A. Morton, State Superintendent of Public Instruction.

Alaska: Our school employes do not come under the Workmen's Compensation Act.—Lester D. Henderson, Commissioner of Education.

Porto Rico: School employes do not have the advantage of any Workmen's Compensation Act.—Carey Hickle, Acting Commissioner of Education.

Hawaii: All school employes come under compensation act.

Summary and Conclusion.

States in which school employes come under the compensation act: California, Colorado, Connecticut, Idaho, Indiana, Iowa, Michigan, Minnesota, Montana, Nebraska, Nevada, North Dakota, Ohio, Pennsylvania, South Dakota, Utah, Virginia, West Virginia.

States in which they do not come under the compensation act: Arizona, Delaware, Kentucky, Louisiana, Maryland, New Hampshire, New Mexico, Oklahoma, Texas, Wyoming, Alaska, Porto Rico.

(Concluded on Page 119)

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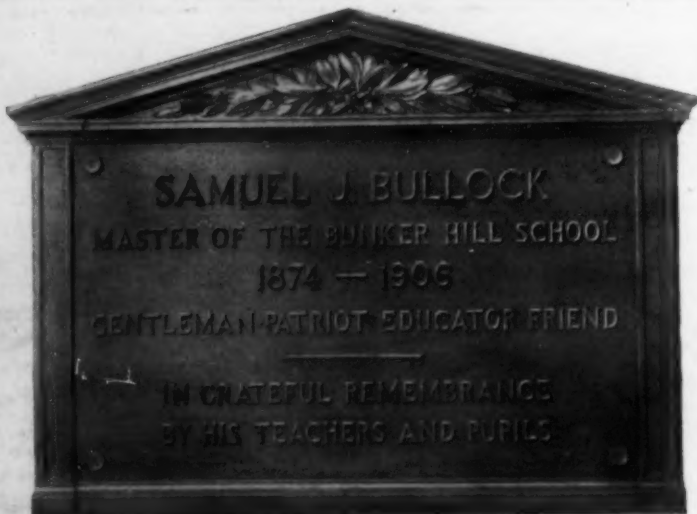
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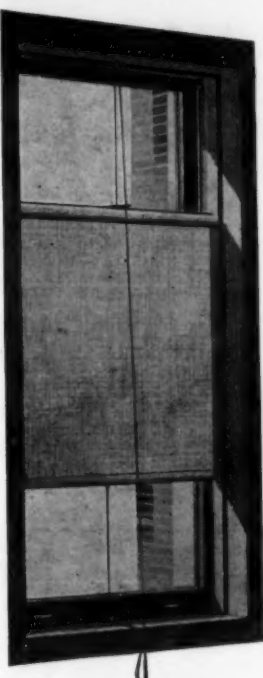
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| Group | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|-------|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | H | | | | | | | | | | | | | | | | | |
| 2 | Li | Be | | | | | | | | | | | | | | | | |
| 3 | | | B | C | N | O | F | Ne | | | | | | | | | | |
| 4 | | | | Al | Si | P | S | Cl | Ar | | | | | | | | | |
| 5 | | | | | As | Se | Br | Kr | | | | | | | | | | |
| 6 | | | | | | Te | I | Xe | | | | | | | | | | |
| 7 | | | | | | | At | Rn | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | |

TABLE OF THE CHEMICAL ELEMENTS WITH THEIR ATOMIC WEIGHTS

| Element | Atomic Weight | Element | Atomic Weight | Element | Atomic Weight |
|---------|---------------|---------|---------------|---------|---------------|
| H | 1.008 | Ca | 40.08 | U | 238.03 |
| He | 4.003 | Sc | 44.96 | Pb | 207.2 |
| Li | 7.00 | Ti | 79.90 | Bi | 208.98 |
| Be | 9.01 | V | 50.94 | Po | 209 |
| B | 10.81 | Cr | 52.00 | At | 210 |
| C | 12.01 | Mn | 54.94 | Rn | 222 |
| N | 14.01 | Fe | 55.85 | | |
| O | 16.00 | Co | 58.93 | | |
| F | 18.99 | Ni | 58.71 | | |
| Ne | 20.18 | Cu | 63.54 | | |
| Na | 22.99 | Zn | 65.37 | | |
| Mg | 24.31 | Ga | 69.72 | | |
| Al | 26.98 | Ge | 72.64 | | |
| Si | 28.09 | As | 74.92 | | |
| P | 30.97 | Se | 78.96 | | |
| S | 32.06 | Br | 79.90 | | |
| Cl | 35.46 | Kr | 83.80 | | |
| Ar | 39.94 | Rb | 85.47 | | |
| K | 39.10 | Sr | 87.62 | | |
| Ca | 40.08 | Y | 88.91 | | |
| Sc | 44.96 | Zr | 91.22 | | |
| Ti | 79.90 | Nb | 92.91 | | |
| V | 50.94 | Mo | 95.94 | | |
| Cr | 52.00 | Tc | 98.91 | | |
| Mn | 54.94 | Ru | 101.07 | | |
| Fe | 55.85 | Rh | 102.91 | | |
| Co | 58.93 | Pd | 106.42 | | |
| Ni | 58.71 | Ag | 107.87 | | |
| Cu | 63.54 | Cd | 112.40 | | |
| Zn | 65.37 | In | 114.82 | | |
| Ga | 69.72 | Sn | 118.69 | | |
| Ge | 72.64 | Sb | 121.75 | | |
| As | 74.92 | Te | 127.60 | | |
| Se | 78.96 | I | 126.90 | | |
| Br | 79.90 | Xe | 131.29 | | |
| Kr | 83.80 | Ba | 137.33 | | |
| Rb | 85.47 | La | 138.91 | | |
| Sr | 87.62 | Ce | 140.12 | | |
| Y | 88.91 | Pr | 140.91 | | |
| Zr | 91.22 | Nd | 144.24 | | |
| Nb | 92.91 | Pm | 145 | | |
| Mo | 95.94 | Sm | 150.35 | | |
| Tc | 98.91 | Eu | 151.96 | | |
| Ru | 101.07 | Gd | 157.25 | | |
| Rh | 102.91 | Tb | 158.93 | | |
| Pd | 106.42 | Dy | 162.50 | | |
| Ag | 107.87 | Ho | 164.93 | | |
| Cd | 112.40 | Er | 167.26 | | |
| In | 114.82 | Tm | 168.93 | | |
| Sn | 118.69 | Yb | 173.05 | | |
| Sb | 121.75 | Lu | 174.97 | | |
| Te | 127.60 | Hf | 178.49 | | |
| I | 126.90 | Ta | 180.95 | | |
| Xe | 131.29 | W | 183.85 | | |
| Ba | 137.33 | Re | 186.21 | | |
| La | 138.91 | Os | 190.23 | | |
| Ce | 140.12 | Ir | 192.22 | | |
| Pr | 140.91 | Pt | 195.08 | | |
| Nd | 144.24 | Au | 196.97 | | |
| Pm | 145 | Hg | 200.59 | | |
| Sm | 150.35 | Tl | 204.38 | | |
| Eu | 151.96 | Pb | 207.2 | | |
| Gd | 157.25 | Bi | 208.98 | | |
| Tb | 158.93 | Po | 209 | | |
| Dy | 162.50 | At | 210 | | |
| Ho | 164.93 | Rn | 222 | | |
| Er | 167.26 | | | | |
| Tm | 168.93 | | | | |
| Yb | 173.05 | | | | |
| Lu | 174.97 | | | | |

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WORKMEN'S COMPENSATION ACT.

(Concluded from Page 117)

States in which the accident compensation is either optional or conditional: Alabama, Maine, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Washington, Wisconsin.

There are no compensation laws in Florida, Georgia, North Carolina, South Carolina and Mississippi.

The conclusion must be that the school authorities of the several states have not deemed it expedient to bring their employes, either teachers or janitors under the Workmen's Compensation Act. Nor have we discovered that teachers or janitors have in any way been actively concerned in coming under this form of protection. All of which would go to demonstrate that the hazards of employment in or about a schoolhouse are exceedingly light.

PUBLICITY CAMPAIGNS.

(Concluded from Page 31)

highly educational for the general public on school matters. Since, as a part of our democratic theory, we allow much liberty to the community in school affairs, opportunities should be provided at times for all to think seriously and clearly on vitally important educational issues. School campaigns furnish such opportunities. They also furnish occasions for the fulfillment of a fundamental duty of those charged with the responsibility for the training of our children, the duty of educating the public in regard to the needs of its schools.

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(Concluded from Page 34)

schools may have a large supply on hand, altho they may have ceased to use the article.

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CERTIFICATION BY EXAMINATION.

(Concluded from Page 30)

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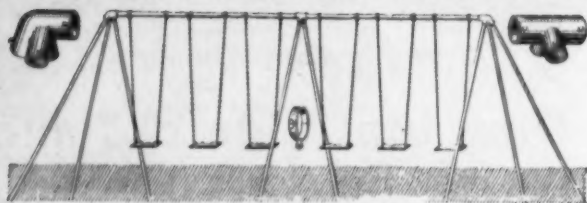
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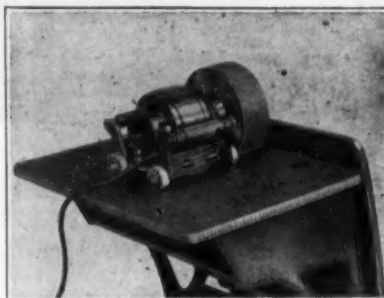
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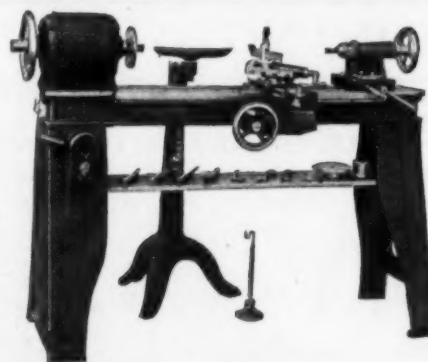
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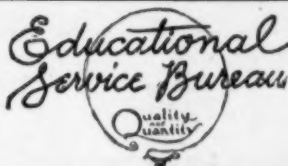
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AFTER THE MEETING



HELP IN ENGLISH COMPOSITION?

The following letter is reproduced verbatim as it reached a teacher in an Alabama city. It is reproduced here thru the courtesy of the superintendent of schools:

Dear Miss _____:

Sorry you don't seem to think Rosie writes her compositions. She searched the libraries to be able to get up satisfactory work for you. However hard she tried it was never satisfactory to you nor me. So I decided to get a volume of books. Which cost me fifty dollars. In order that she might read and do more satisfactory work. Since I bought some book for Rosie to read I have not helped her the least with her English. If you or Mr. Blank have a better plan of learning than to read good books. I do appreciate you writing the plan to me. I have no money to boast of, but if necessary I could boast of Rosie's integrity. It is time for me to investigate when you insinuate that Rosie's work was so good. You didn't believe she did it. I am here to just say she did do her composition with the help of this volume of book. I bought especially that she might read them and do better work.

If to read book and get up good work does not please you. I am at my rows end and kindly ask you to suggest a more feasible plan. And stop your insinuations of Rosie's being dishonest in her work.

Respectfully,
MRS. BLANK.

At the College Commons.

"Well," said the waiter to the student, who had just had his coffee cup refilled for the seventh time, "you must be very fond of coffee."

"Yes, indeed," answered the student, "or I wouldn't be drinking so much water to get a little."

Jimmy's Compliment.

"Ma," said Jimmy, "the teacher give me a fine compliment today."

"Oh, did she?" said the delighted mother. "What did she say to you?"

"Well, she didn't exactly say anything to me, but she told George that he was the worst boy in school, and that she liked even me better than him."

Teacher—Henry, what is a hypocrite?

Henry—A hypocrite is a kid wot comes to school wid a smile on his face.

Right.

Kindergarten Teacher—Children, can you tell me what animals belong to the cat family?

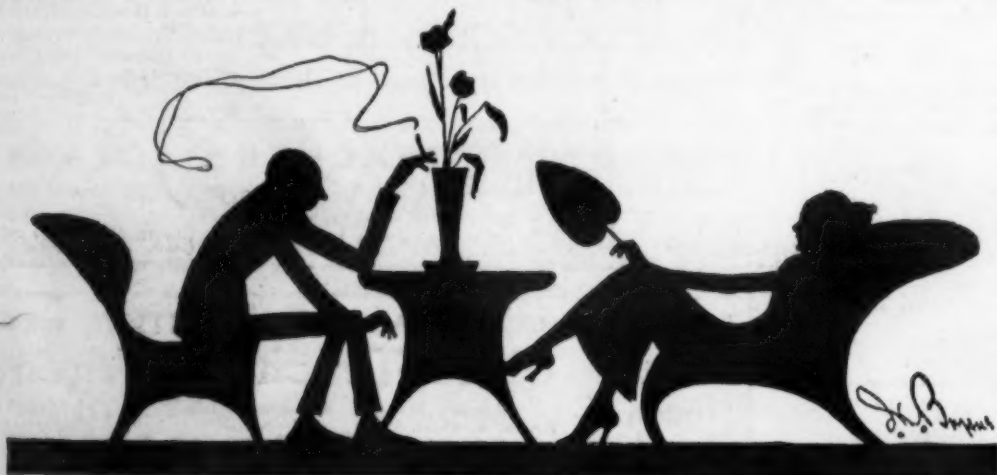
Charlie Peterson—Tigers, lions and mice.

Teacher—Oh, no, Charlie, not mice.

Charlie—Yes, ma'am, they do—they do when our cat and kittens get them.

Willis: Your son has the true college spirit, you say?

Gillis: Yes. He firmly believes that he is the greatest drinker in the greatest class that ever was graduated from the greatest institution in the country.



Inspector: Any abnormal children in your class, Miss Pedagog?
School Teacher: Yes; one of them is well behaved.

A Bit Mixed.

One day a new pupil in a music settlement school came home and asked:

"Mother, how many carrots are there in a bushel? Teacher wants to know."

"What?" answered the mother. "What has that to do with music?"

"I don't know," replied the child.

The next day the mother went to the music school to inquire what kind of music her child was being taught.

The teacher laughed and said: "Well, that is hardly correct, madam. What we asked your child was how many beats there were in a measure."

An instructor in a New England normal school recently discussed a phase of economics which brought to light the fact that the male population largely exceeds the female in some countries and even some sections of the United States. In a spirit of humor he added that there are unusual opportunities for young teachers in communities where such a condition exists.

A member of the class who apparently misunderstood the remark arose and rather indignantly left the room.

"Well," said the instructor, "I think you need not be in quite such a hurry."

A teacher had put in a busy afternoon taking ten of her pupils thru the museum of natural history, but her charges had enjoyed every minute of the time.

"Where have you been?" asked the mother of two of the party when they came home for supper.

"We've been to a dead circus," was the surprising answer of one of the lads.

Teacher: "Marie, what figure of speech is, 'I love my teacher'?"

Marie L.: "Sarcasm."

Physics Teacher: "What is air, James?"

Boy: "I can't think of it just now, but it is in my head."

The Elusive Jeopard.

An applicant for a place as teacher in one of the colored schools at Louisville was being examined touching his fitness for the position. He was a small, dapper, yellow person, wearing gold spectacles, a long black coat and an abiding air of great dignity.

The examination was in part oral and syntax had been reached.

"What is your definition of the word 'jeopardized'?" asked the examiner.

The candidate's brow wrinkled.

"Which?" he inquired.

"What do you understand the word 'jeopardized' to mean?"

For just one short half-minute he hesitated. Then he answered sonorously:

"In reply to yo' question I would state that that would refer to any act committed by a jeopard."—*Saturday Evening Post*.

The Impossible.

"What are you crying about, Tommy?"

"Can't do this old arithmetic."

"Let me see your slate; perhaps I can help you."

"Here 'tis, Dad; it looks easy— $2+2=5$."

" $2+2=5$? m—m—m—. Alas, my boy, I can only shed with you the sympathetic tear. I cannot help you with those figures. It's the same old problem that in one form or another, I've been working on all my life; but I haven't solved it yet and I've come to the conclusion that 'it can't be did.'"

BUYERS' NEWS COLUMN

SCHOOL FILING AND RECORDS.

An illustrated circular describing "Record Systems for Schools" has been issued by the Yawman & Erbe Manufacturing Co. of Rochester, N. Y. The records include a series of blanks covering various school activities such as attendance, studies, etc. Various filing equipment is also illustrated and described.

ISSUE NEW CATALOG.

The Chicago Apparatus Company has just issued the 1920 revised edition of its General Catalog of Apparatus for School Science Teaching. The book contains 163 pages and has been entirely revised in its illustrations, descriptions, and prices. The several subjects for which apparatus and supplies are listed are in alphabetical order and this arrangement has been maintained in the listing of each subject. Science instructors will find the catalog and its arrangement convenient for use without the assistance of an index. Copies of the catalog are available for any school authority that desires them.

NEW VICTOR EDUCATIONAL RECORDS.

The Victor Company has just prepared for school use a new double record containing songs from Scott's "The Lady of the Lake." The songs are entitled "The Tolls Are Pitch'd" and "They Bid Me Sleep," and both are rendered in old traditional airs by Laura Littlefield.

Teacher Was Fooled.

At a German recitation the class was asked for the German forms of English words.

"What is the German for lawyer, Tommy?" asked Miss Jones of my neighbor.

The German for lawyer is pronounced *Ahd fo kaht*. Altho Tommy and I had studied this lesson with great zeal the night before, we could not recollect the word. So Tommy stammered very sullenly:

"I fo'got."

"Good!" said Miss Jones, first to Tommy's astonishment, then to his amusement as he saw the point, and finally to his delight, because he avoided getting a zero.

The Days of Real Sport.

Teacher—The centaurs were creatures with the head and arms of a man and the body of a horse. Billy (the Ty Cobb of his team)—Gee! what a combination for battin' and base runnin'!—*Judge*.

Something Left.

"Yes," said the sweet teacher from New England, "I am going to marry him to reform him."

"Huh! What is there left to reform?"

"Well, he occasionally splits his infinitives."

Made Him Nervous.

"It is an established fact," said the lecturer, "that the sun is gradually but surely losing its heat, and in the course of seventy million years it will be exhausted; consequently, this world of ours will be dead, and, like the moon, unable to support any form of life."

The head and shoulders of an excited member of the audience rose above those of his fellows.

"Pardon me, professor!" he cried. "How many years did you say it would be before this calamity overtakes us?"

"Seventy millions, sir," said the professor.

"Thank Heaven!" gasped the interrogator, sinking back exhausted into his seat. "I thought you said seven millions!"

Geography in Person.

The school examiner was putting the children thru their paces. His immediate subject was geography. Standing in the middle of the platform, he said:

"We will suppose this whole school is composed of water, and I am on an island. Now, what island would I represent?"

"The Isle of Man," came a quick reply.

Then, calling the teacher to him, he asked again: "Now, suppose we both stood together like this, what island would we represent?"

"The Scilly islands, sir," came the answer in a loud voice.

School Goods Directory

ADJUSTABLE WINDOW SHADES

Oliver C. Steele Mfg. Co.
L. O. Draper Shade Co.
Aeroshade Company
Walger Awning Co.
Athey Company
Forse Manufacturing Co.

AIR CONDITIONING APPARATUS

American Blower Co.
Moline Heat

ASH HOISTS

Gillis & Geoghegan
F. S. Payne Company

AUDITORIUM SEATING

Peabody School Furniture Co.
American Seating Co.
N. J. School Furniture Co.
Heywood Bros. & Wakefield Co.
Empire Seating Co.
Theo. Kundt Co.

BLACKBOARDS—COMPOSITION

N. Y. Silicate Book Slate Co.
Beaver Board Companies
E. W. A. Rowles Co.
Weber Costello Co.

BLACKBOARDS—NATURAL SLATE

Keenan Structural Slate Co.
Penna. Struct. Slate Co.
Natural Slate Blackboard Co.

BOOK COVERS

Holden Patent Book Cover Co.

BOOK PUBLISHERS

Edward E. Babb & Co.
Gregg Publishing Company
D. C. Heath & Co.
Hinds, Hayden & Eldredge, Inc.
Isaac Pitman & Sons
Silver, Burdett & Co.
American Book Co.
A. N. Palmer Co.
Ginn & Company
Educational Publishing Company
J. B. Lippincott Co.
Laird & Lee, Inc.

BRUSHES

Theo. B. Robertson Products Co.

BUILDING PRODUCTS

Asbestos-Crete Buildings Co.

CAFETERIA EQUIPMENT

Albert Pick & Co.

CHARTS

Weber Costello Co.
A. J. Nystrom & Co.

CHEMICAL CLOSETS

Dall Steel Products Co.
Chemical Toilet Corporation

CRAYONS

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American Crayon Co.
E. W. A. Rowles Co.
Weber Costello Co.
National Crayon Co.

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Wayvell Chappell & Co.

DESK RENOVATORS

National Wood Renovating Co.

DICTIONARY STANDS

Union School Furnishing Co.

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W. M. Welch Mfg. Co.
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DOMESTIC SCIENCE EQUIPMENT

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Leonard Peterson & Co.
Federal Equipment Co.
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DOOR CHECKS

Norton Door Check Co.

DRAFTING ROOM FURNITURE

E. H. Sheldon & Co.

DRAWING MATERIALS

Devos & Reynolds

DRINKING FOUNTAINS

L. Wolff Mfg. Co.
N. O. Nelson Mfg. Co.
Rundle-Spence Mfg. Co.
Imperial Brass Mfg. Co.

DRINKING WATER

STERILIZERS

E. U. V. Co. Inc., The

DUPLICATORS

A. B. Dick Company

EDUCATIONAL FILMS

Fitzpatrick & McElroy

ERASERS

Weber Costello Co.
E. W. A. Rowles Company

ERASER CLEANERS

Weber Costello Co.

FIRE ESCAPES—SPIRAL

Dow Wire & Iron Works
Standard Conveyor Co.

FIRE EXIT LATCHES

Vonnegut Hardware Co.
Sargent & Co.
F. F. Smith Hardware Company
Van Kannel Revolving Door Co.

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Dahlstrom Metallic Door Co.

FIRST AID CABINETS AND MATERIALS

Johnson & Johnson.

FIREPROOFING MATERIALS

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N. O. Nelson Mfg. Co.

FLAGS

Annin & Co.
John C. Dettra & Co.

FLOOR BRUSHES

Milwaukee Dustless Brush Co.

FOLDING PARTITIONS

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FURNACES

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N. J. School Furniture Co.
Heywood Bros. & Wakefield Co.
Columbia School Supply Co.
Empire Seating Co.
Qualit Art Furniture Co.
Theo. Kundt Co.
Columbia School Equipment Works.
Kenney Bros. & Wolkins
E. W. A. Rowles Company
E. H. Stafford Mfg. Co.

GLOBES

Weber Costello Co.
A. J. Nystrom & Co.

GRAPHOPHONES

Columbia Graphophone Co.

GYMNASIUM APPARATUS

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Narragansett Machine Company

HEATERS

Haynes-Langenberg Mfg. Co.
Virginia School Supply Co.

INK

E. W. A. Rowles Co.
Howard Chemical & Mfg. Company

INK WELLS

U. S. Inkwell Co.
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Leonard Peterson & Co.
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W. M. Welch Mfg. Co.
Chicago Apparatus Company
E. W. A. Rowles Company

LANTERN SLIDES

McIntosh Stereopticon Co.
Keystone View Company

LATCHES

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Durand Steel Locker Co.

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LIQUID FLOOR HARDENER

L. Sonneborn Sons

LIQUID SOAP

Imperial Brass Mfg. Co.
Theo. B. Robertson Products Co.

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Armor Clad Mfg. Company
Federal Steel Fixture Co.
Duand Steel Locker Co.
Fred Medart Mfg. Co.
Narragansett Machine Company

LOCKS—KEYLESS

J. B. Miller Keyless Lock Co.

MACHINERY

Oliver Machinery Co.
Amer. Wood Work. Mach. Co.

MANUAL TRAINING EQUIPMENT

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Kewaunee Mfg. Co.
Oliver Machinery Co.
Columbia School Supply Co.

MAPS

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A. J. Nystrom & Co.

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PAPER TOWELS

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Holden Patent Book Cover Co.
Theo. B. Robertson Products Co.
Northern Paper Mills

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Jos. Dixon Crucible Co.

PENS

Esterbrook Steel Pen Co.
Spencerian Pen Company

PENCIL SHARPENERS

Automatic Pencil Sharpener Co.

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Steger & Sons Piano Mfg. Co.

PLAYER PIANOS

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N. O. Nelson Mfg. Co.
James B. Clow & Sons
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Hoffmann & Billings Mfg. Co.
Brunswick-Balke-Collender Co.

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Merabon & Morley
American Portable House Co.
The Armstrong Co.
Louis Bossert & Sons

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Landis Eng. & Mfg. Co.
Seth Thomas Clock Co.
Time-Systems Co.

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Enterprise Optical Mfg. Co.
Victor Animatograph Co.
Spencer Lens Co.
McIntosh Stereopticon Company

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Metropolitan Supply Co.

SCALES

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Continental Scale Works

SCENERY

Twin City Scenic Co.

SCIENTIFIC APPARATUS

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Chicago Apparatus Company
Central Scientific Company
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Hoffmann & Billings Mfg. Co.

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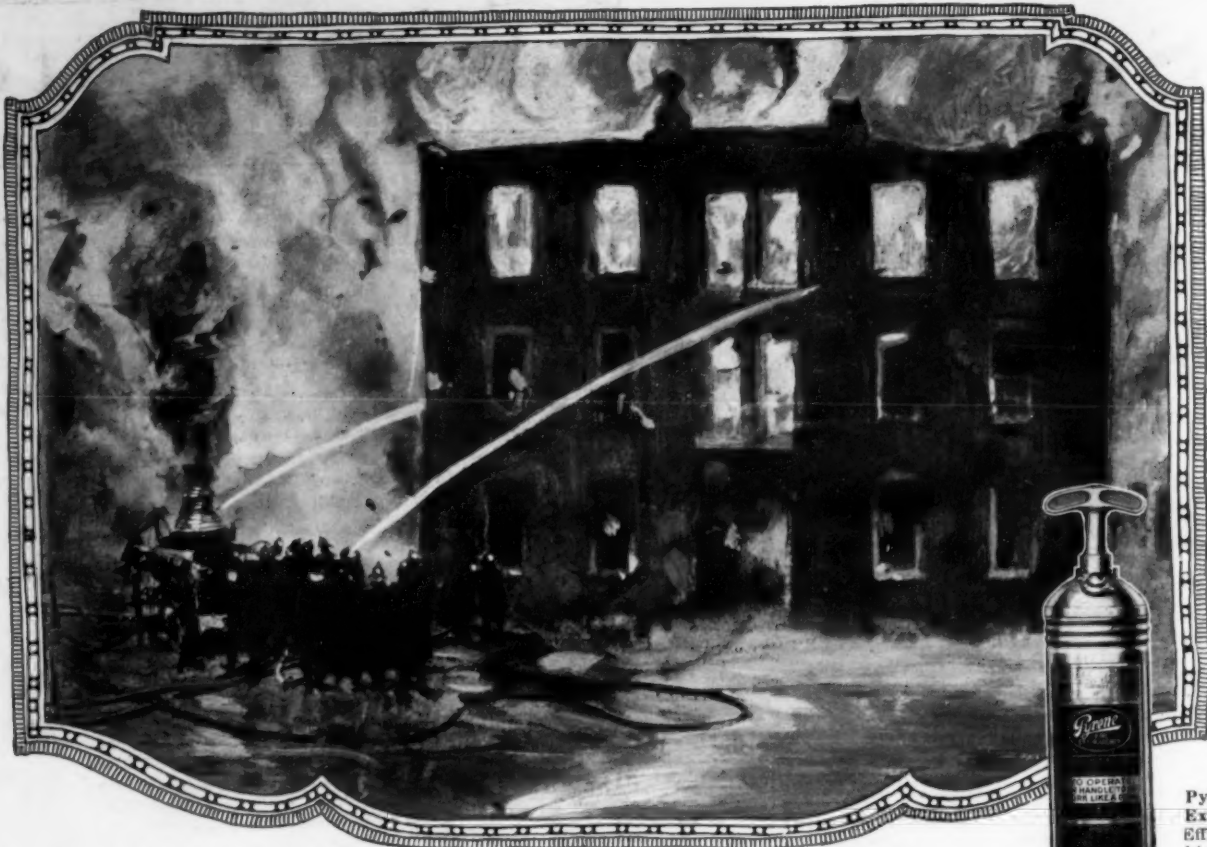
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Pyrene Oily Waste Can. Absolutely prevents spontaneous combustion of waste and rubbish. 13 to 20½ inches high.



Pyrene Fire Extinguisher—Effective on all kinds of fire, particularly gasoline and oil.

A Complete Fire Protection Service

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The lightness and simplicity of Pyrene Extinguishers recommend them for school use where a woman or young child may have to put out a fire. Pyrene extinguishers can be left in unheated buildings as they will not freeze.

Guardene extinguishers have all the improvements of the soda and acid type. This extinguisher weighs 40 pounds and is highly effective on all fires except gasoline or oil.

Pyrene and Guardene Extinguishers can be purchased from hardware, automobile or school supply dealers everywhere

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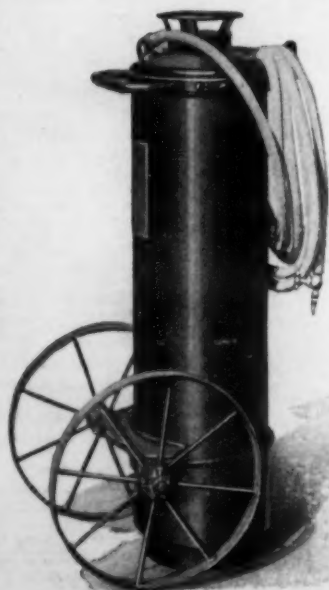
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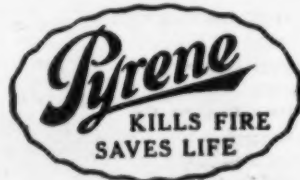
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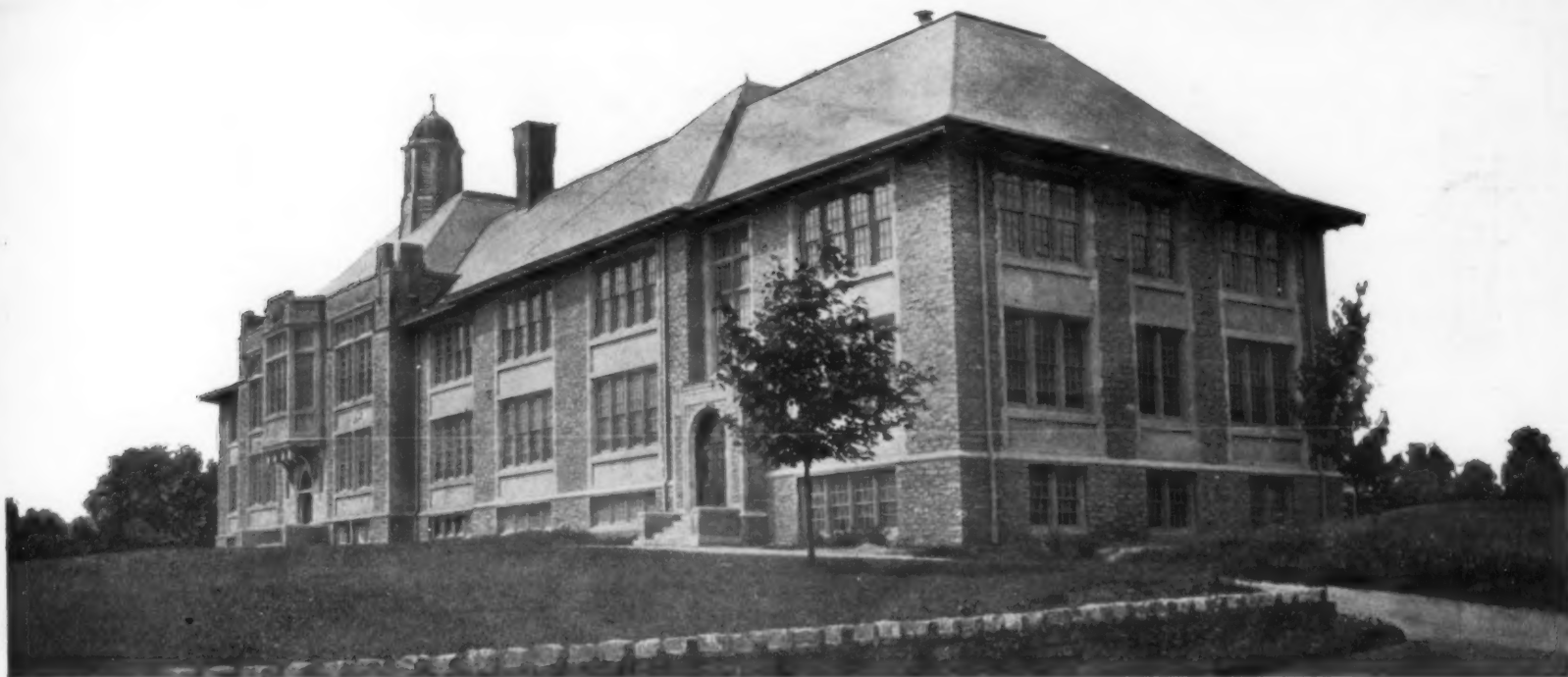
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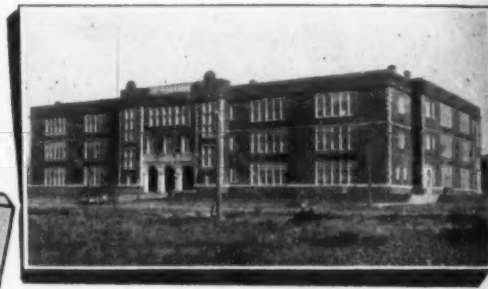
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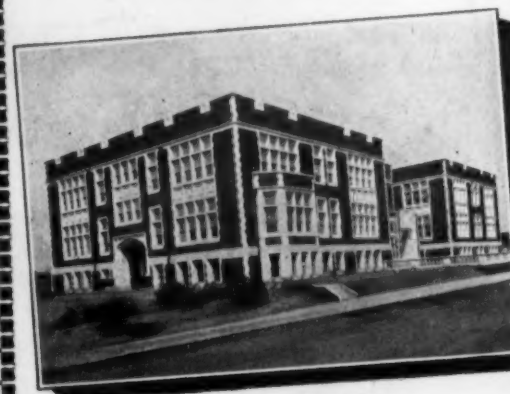
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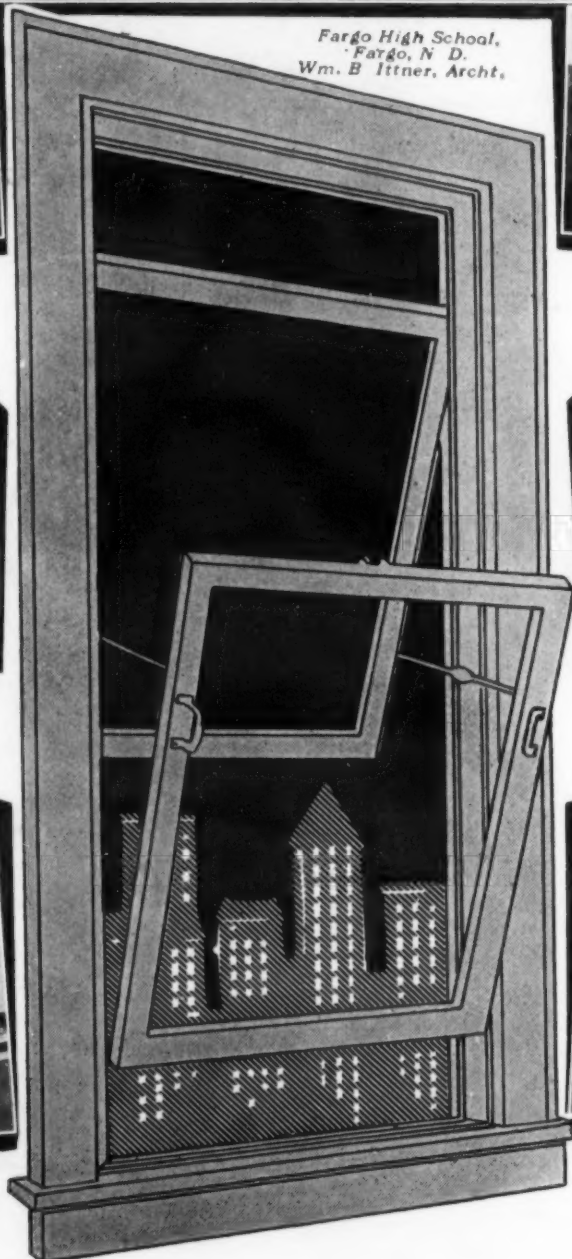
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